United States Circuit Court of Appeals

FOR THE SIXTH CIRCUIT.

No. 964.

GENERAL EXCAVATOR COMPANY,
Appellant,

vs.

KEYSTONE DRILLER COMPANY,
Appellee.

KEYSTONE DRILLER COMPANY,
Cross-Appellant,

vs.

GENERAL EXCAVATOR COMPANY,
Cross-Appellee.

No. 965.

THE OSGOOD COMPANY,
Appellant,

vs.

KEYSTONE DRILLER COMPANY,
Appellee.

KEYSTONE DRILLER COMPANY,
Cross-Appellant,

vs.

THE OSGOOD COMPANY,
Cross-Appellee.

APPEALS FROM THE UNITED STATES DISTRICT COURT,
FOR THE NORTHERN DISTRICT OF OHIO,
WESTERN DIVISION.

TRANSCRIPT OF RECORD
VOLUME II
TESTIMONY AND APPEAL PLEADINGS

NAMES AND ADDRESSES OF COUNSEL
(Inside Front Cover)

INDEX

VOLUME II

NARRATIVE STATEMENT OF EVIDENCE
UNDER EQUITY RULE 75

Cases Nos. 964 and 965

DEPOSITIONS FOR DEFENDANTS
(Continued)

Taken at Leadville, Colorado
(March 24, 1930)

Notices of Taking Testimony 609

Herbert H. Wallower:

Direct Examination by Mr. Mahoney 610

Cross Examination by Mr. Edgerton 613

DEFENDANTS' TESTIMONY IN OPEN COURT
(Continued)

George A. Gretser:

Direct Examination by Mr. Mahoney 617

Cross Examination by Mr. Richey 619

Re-Direct Examination by Mr. Mahoney 620

Walter Ferris:

Direct Examination by Mr. Corbett 621

DEPOSITIONS FOR DEFENDANTS
(Continued)

Taken at Columbus, Ohio
(December 30, 1930)

Notices of Taking Testimony 652

W. R. Lawrence:

Direct Examination by Mr. Mahoney 653

Ben S. Thompson:
Direct Examination by Mr. Mahoney 654

Clarence Yardley:
Direct Examination by Mr. Mahoney 655
Cross Examination by Mr. Edgerton 659

DEFENDANTS' TESTIMONY IN OPEN COURT
(Continued)

Walter Ferris (Resumed):
Direct Examination by Mr. Corbett 660
Direct Examination by Mr. Reed 675

DEPOSITIONS FOR DEFENDANTS
(Continued)

Taken at Cleveland, Ohio

(November 19, 1930)

Notices of Taking Testimony 680

William C. Bolgiano:
Direct Examination by Mr. Mahoney 681
Cross Examination by Mr. Edgerton 686
Re-Direct Examination by Mr. Mahoney 687

George Fay:
Direct Examination by Mr. Mahoney 687
Cross Examination by Mr. Edgerton 691

J. M. Rice:
Direct Examination by Mr. Mahoney 692
Cross Examination by Mr. Edgerton 693
Re-Direct Examination by Mr. Mahoney 694
Re-Cross Examination by Mr. Edgerton 695

DEFENDANTS' TESTIMONY IN OPEN COURT
(Continued)

Walter Ferris (Resumed):
Direct Examination by Mr. Reed 696
Direct Examination by Mr. Corbett 703
Direct Examination by Mr. Reed 704
Cross Examination by Mr. Richey 705
Re-Direct Examination by Mr. Corbett 725
Re-Cross Examination by Mr. Richey 728

DEPOSITIONS FOR DEFENDANTS
(Continued)
Taken at Lakewood, New Jersey
(October 21, 1930)

Notices of Taking Testimony 735
Bernard R. Clutter:
Direct Examination by Mr. Mahoney 736
Cross Examination by Mr. Edgerton 755
Re-Direct Examination by Mr. Mahoney 763

Taken at Akron, Ohio
(October 24, 1930)

Notices of Taking Testimony 767
Frederick W. Ransom:
Direct Examination by Mr. Mahoney 768
Cross Examination by Mr. Edgerton 771

PLAINTIFF'S REBUTTAL TESTIMONY.
IN OPEN COURT

Orley D. Hanshew:
Direct Examination by Mr. Siggers 779
Cross Examination by Mr. Corbett 791
Paul Sessions:
Direct Examination by Mr. Richey 792

E. M. Morrison:
Direct Examination by Mr. Edgerton 795

Howard H. Elmire:
Direct Examination by Mr. Edgerton 796
Cross Examination by Mr. Williams 800
Re-Direct Examination by Mr. Edgerton 817
Re-Cross Examination by Mr. Corbett 817

Rex R. Downie:
Direct Examination by Mr. Richey 818

W. A. McElhany:
Direct Examination by Mr. Richey 868
Cross Examination by Mr. Corbett 873

DEPOSITION FOR PLAINTIFF

Taken at Toledo, Ohio

(March 17, 1931)

Samuel B. Markley:
Direct Examination by Mr. Edgerton 875
Cross Examination by Mr. Corbett 881

DEFENDANTS' CASE

(Continued)

DEPOSITIONS FOR DEFENDANTS

Taken at South Milwaukee, Wisconsin

(April 29, 1931)

Notices of Taking Testimony 890

William M. Bager:
Direct Examination by Mr. Mahoney 891
Cross Examination by Mr. Edgerton 902

Werner Lehman:
Direct Examination by Mr. Mahoney 910
Cross Examination by Mr. Edgerton 912

N. A. McGrath:
Direct Examination by Mr. Mahoney 913
Cross Examination by Mr. Edgerton 917

C. A. Kelly:
Direct Examination by Mr. Mahoney 918
Cross Examination by Mr. Edgerton 920
Re-Direct Examination by Mr. Mahoney 921

Andrew Vahldieck:
Direct Examination by Mr. Mahoney 921

Noel S. Hayward:
Direct Examination by Mr. Mahoney 922
Cross Examination by Mr. Edgerton 923
Re-Direct Examination by Mr. Mahoney 924

D. P. Eells:
Direct Examination by Mr. Mahoney 924
Cross Examination by Mr. Edgerton 931

Carlyle Brinkman:
Direct Examination by Mr. Mahoney 931
Cross Examination by Mr. Edgerton 933

J. H. Imse:
Direct Examination by Mr. Mahoney 933

H. O. Jacobsen:
Direct Examination by Mr. Mahoney 934
Cross Examination by Mr. Edgerton 934

PLAINTIFF'S REBUTTAL TESTIMONY
(Continued)

Rex R. Downie (Recalled):
Direct Examination by Mr. Richey 989
Cross Examination by Mr. Corbett 955
Cross Examination by Mr. Reed 956

Robert C. Sessions:
Direct Examination by Mr. Richey 957
Direct Examination by Mr. Edgerton 958
Cross Examination by Mr. Corbett 979

DEFENDANT'S SURREBUTTAL TESTIMONY

IN OPEN COURT

Walter Ferris:
Direct Examination by Mr. Corbett 982
Cross Examination by Mr. Richey 984

PLAINTIFF'S REBUTTAL TESTIMONY
(Continued)

Rex R. Downie:
Direct Examination by Mr. Richey 985
Colloquy between Court and Counsel 986

Rex R. Downie (Recalled):
Direct Examination by Mr. May 988
Cross Examination by Mr. Williams 1017
Re-Direct Examination by Mr. May 1039
Re-Cross Examination by Mr. Williams 1040

DEFENDANT'S SURREBUTTAL TESTIMONY
(Continued)

Horace B. Fay:
Direct Examination by Mr. Corbett 1041
Cross Examination by Mr. Richey 1043
Re-Direct Examination by Mr. Corbett 1045
Re-Cross Examination by Mr. Richey 1062

PLAINTIFF'S REBUTTAL TESTIMONY
(Continued)

Philip E. Siggers:

Direct Examination by Mr. May 1046

Cross Examination by Mr. Williams 1050

Rex R. Downie (Recalled):

Direct Examination by Mr. May 1051

Colloquy of Court and Counsel 1063

CONSOLIDATED

Cases Nos. 964 and 965

Memorandum Opinion of Hahn 1067

Clutter Patent No. 1,317,431 1068

The First Downie Patent, No. 1,511,114 1068

The Second Downie Patent, No. 1,543,250 1068

The Third Downie Patent, No. 1,709,466 1071

The Fourth Downie Patent, No. 1,716,432 1072

Suppression of Evidence as to Downie Patent No. 1,511,114 1073

Period About Latter Part of 1919 and Early Part of 1920 1074

Proceedings After the Completion of the Joplin, Missouri, Work 1076

Two Conferences Between Rex R. Downie and Bernard Clutter, One Under Date of April 16, 1925, and One Prior Thereto 1077

Summary of Second Deposition of Bernard Clutter, Taken October 1, 1930 1078

Summary of Testimony of Howard H. Elmire 1080

Summary of Testimony of Rex R. Downie 1081

Testimony and Exhibits Relating to the Purchase of Two Excavators 1082

New Agreement Before Shovels Had Been Repossessed 1085

Was the Testimony as to What Was Done at Joplin, Missouri, Relevant and Material 1087

Conclusions 1088

Was Any Fraud Sought to be Perpetrated Upon This Court in the Trial of These Cases 1097

APPEAL PAPERS
In Case No. 964

Motion and Order Granting Plaintiff Leave to File Chart of Downie Patent 1,709,466 as Plaintiff's Exhibit No. P-77 (Jun. 26, 1931) 1101

Request for Findings of Fact and Conclusions of Law (Jul. 15, 1931) 1101

Findings of Fact (Jul. 15, 1931) 1102

Conclusions of Law (Jul. 15, 1931) 1104

Interlocutory Decree (Jul. 21, 1931) 1107

Petition for Appeal (Jul. 28, 1931) 1111

Assignment of Errors (Jul. 28, 1931) 1111

Order Allowing Appeal and Granting Supersedeas (Jul. 29, 1931) 1114

Supersedeas Bond on Appeal (Jul. 29, 1931) 1115

Citation on Appeal (Jul. 29, 1931) 1117

Petition for Cross Appeal (Aug. 7, 1931) 1119

Assignment of Errors on Cross-Appeal (Aug. 7, 1931) 1119

Order Allowing Cross-Appeal (Aug. 10, 1931) 1121

Bond on Cross-Appeal (Aug. 13, 1931) 1122

Citation on Cross-Appeal (Aug. 14, 1931) 1125

Order Extending Time to Sept. 15, 1931, Within Which to Lodge Narrative of Testimony (Aug. 22, 1931) 1127

Order Extending Time to Sept. 28, 1931, for Filing Transcript of Record (Aug. 22, 1931) 1127

Motion to Extend Time to Oct. 28, 1931, to File Transcript of Record (Sept. 24, 1931) 1127

Affidavit of Edward L. Reed in Support of Motion (Sept. 24, 1931) 1128

Order Extending Time to Oct. 28, 1931, for Filing Transcript of Record (Sept. 24, 1931) 1129

APPEAL PAPERS

In Case No. 965

Motion for Entry of Prompt Decree (Jun. 25, 1931) 1130

Request for Findings of Fact and Conclusions of Law (Jun. 11, 1931) 1131

Findings of Fact (Jun. 11, 1931) 1132

Conclusions of Law (Jun. 11, 1931) 1135

Interlocutory Decree (Jul. 21, 1931) 1137

Petition for Appeal (Jul. 28, 1931) 1140

Assignment of Errors (July 28, 1931) 1141

Order Allowing Appeal with Supersedeas (Jul. 29, 1931) ... 1145

Bond on Appeal (Jul. 29, 1931) 1145

Citation on Appeal (Jul. 29, 1931) 1147

Petition for Cross-Appeal (Aug. 7, 1931) 1149

Order Allowing Cross-Appeal (Aug. 10, 1931) 1151

Bond on Cross-Appeal (Aug. 13, 1931) 1152

Citation on Cross-Appeal (Aug. 14, 1931) 1155

Order Extending Time to Sept. 15, 1931, Within Which to Lodge Narrative Form of Testimony (Aug. 22, 1931) ... 1157

Order Extending Time to Sept. 28, 1931, for Filing Transcript of Record (Aug. 22, 1931) 1157

Motion to Extend Time to Oct. 28, 1931, to File Transcript of Record (Sept. 24, 1931) 1158

Exhibit A. Affidavit of John J. Mahoney in Support of Motion (Sept. 24, 1931) 1159

Order Extending Time to Oct. 28, 1931, for Filing Transcript of Record (Sept. 24, 1931) 1160

CONSOLIDATED

Cases Nos. 964 and 965

Consolidated Praecipe for Transcript (Sept. 16, 1931) 1160

Papers in Equity Cause No. 964 1161

Papers in Equity Cause No. 965 1164

Papers and Records Common to Causes Nos. 964 and 965 1167

Papers in Equity Cause No. 964 1167

Papers in Equity Cause No. 965 1168

Papers Common to Equity Causes Nos. 964 and 965 1169

Proof of Service 1169

Stipulation re Withdrawal of Exhibits (Sept. 24, 1931) 1170

Order Withdrawing Certain Exhibits (Sept. 24, 1931) 1171

Stipulation and Order Re Amendments or Objections to Narrative Form of Testimony (Sept. 25, 1931) 1172

Plaintiff's Additional Praecipe for Transcript—Consolidated (Sept. 26, 1931) 1173

Papers in Equity Cause No. 964 1173

Papers in Equity Cause No. 965 1173

Stipulation Re Certification of Record (Sept. 26, 1931) 1174

Stipulation and Order Re Patents (Oct. 14, 1931) 1175

Order Extending Time to Nov. 21, 1931, for Filing Transcript of Record in the United States Circuit Court of Appeals 1176

Certificate of Clerk 1177

DEPOSITION FOR THE DEFENDANTS

Taken at Leadville, Colorado.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building,
Cleveland, Ohio.
Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of Herbert Wallower, 815 Harrison Avenue, Leadville, Colorado, who resides more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Loretta Walsh, a Notary Public in and for the County of Lake, Colorado, who is not of counsel nor interested in this cause, at the office of Loretta Walsh, Room 20 Emmett Block, Leadville, Colorado, on the 24th day of March, 1930, at ten o'clock a. m., and thereafter from day to day as the taking of the deposition may be adjourned; and such testimony will be taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated at Columbus, Ohio, this 14th day of March, 1930. Service acknowledged March 15, 1930.

RICHEY & WATTS.

PRINTER'S NOTE:

A like Notice was issued on behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Loretta Walsh, a notary public, Room 20 Emmett Block, Leadville, Colorado, commencing at ten o'clock a. m., on the 24th day of March, 1930. Counsel for all parties being present.

HERBERT H. WALLOWER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Herbert H. Wallower. I reside at Leadville, Colorado. I am thirty-eight years of age. I am a mine operator. I have lived in Joplin, Missouri. The period I lived there was from June, 1919, until August, 1920. I was once one of the partners of Wallower Brothers in Joplin, Missouri. I am testifying under subpoenas in these cases. Wallower Brothers had the sub-contract for the excavation of the Joplin Supply Company basement, Third and Joplin Streets, Joplin, Mo. I was superintendent in charge of operation on this work. We used an excavation machine, a Keystone shovel to do the excavation work on the basement for this building. The first attachment used on this machine when we started the work on this excavation was called a skimmer scoop. The excavation was partly completed with the skimmer scoop and completed by means of another attachment. We changed from the skimmer scoop attachment to the other attachment on account of mud and water in the bottom of the excavation, and on account of the difficulty in getting the teams and wagons out of the excavation. It was necessary to remove the machine from the excavation and complete it by operating a machine from the surface. The machine that was used on the surface was a standard ditcher scoop attachment manufactured by the Keystone Driller Company and it was called an instroke ditcher scoop. Defendant's Exhibit No. 24 represents the type of attachment that was used when the machine was removed from the excavation to the surface. This attachment had a pivoted scoop.

The progress of the work was much impeded by the use of this instroke pivoted scoop attachment on the machine. In tripping the latch on the pivoted bucket it was difficult to control the dumping at its intended place and resulted in much spillage of the spoil and wreckage of the dump wagons. Bernard R. Clutter was operating this machine for us on this Joplin Supply Company job. He was a competent operator. I recall that we were able to overcome the difficulties we were having with this type of attachment having the pivoted scoop thereon. To overcome these difficulties I removed, or had removed, the attachments to the standard skimmer scoop and

devised a method whereby it could be rigidly attached to the bottom end of the ditcher stick with the open end of the scoop directed towards the machine, and so that it could be used in an instroke manner, utilizing the drop bottom of the scoop. The drop bottom was used to dump or unload the dirt in the scoop. When I have been referring to the skimmer scoop that was rigidly attached to the instroke ditcher stick I meant the type of skimmer scoop shown in Figure 1 of the drawings of the patent Defendant's Exhibit 25.

Referring to the skimmer scoop shown in the drawings Figure 1 of Defendant's Exhibit 25 the parts of the skimmer scoop which were removed when the skimmer scoop was adapted for use on the instroke ditcher stick were numbers 47, 48, 49, 50, 55 and the part marked 44. The skimmer scoop was taken to the shops of the Keystone Driller Company at Joplin, Mo., to have the changes made adapted to the instroke ditcher stick. The changes about which I have testified were made by the Keystone Driller Company insofar as they were made in their own shops but under my direction. The blue print Defendant's Exhibit 26 represents substantially the type of attachment that was used on this excavating job. This blue print shows substantially the manner in which I directed the skimmer scoop to be attached to the instroke ditcher stick so that the scoop was used as a rigidly attached drop bottom bucket. The skimmer scoop bucket was rigidly held on the instroke ditcher stick as follows, referring to Defendant's Exhibit 26. The back side of the scoop was attached to the bottom of the ditcher stick by a pivoted pin, which was also used in connection with its use as the standard form of instroke ditcher. To the sides of the scoop on its forward upper end there were attached angle braces joined to the ditcher stick at a point above the scoop. These constituted the elements making the scoop rigid to the ditcher stick and rendered the lower pivotal bearing inoperative. The purpose of the block shown on the drawing between the guide member and the ditcher stick may be explained as follows. When used as a standard instroke ditcher, for purpose of dumping the bucket, the pin connecting the two angle braces at their upper end was designed to slide in a slot between a guide and the ditcher stick, so that in order to make the scoop rigid it was necessary to fill the slot with a block of wood in order to make the upper connecting pin of the angle braces immovable and hence result in

the scoop becoming a rigid member. The drawing Defendant's Exhibit 26 shows substantially the same manner in which the bottom was dropped in dumping when rigidly attached to the instroke ditcher stick. That is my signature on that blue print. This drop bottom scoop rigidly attached to the instroke ditcher stick on the Keystone excavator was actually used in the excavation of the Joplin Supply Company basement at Joplin, Missouri.

The machine as rigged up with the attachments last described by me was operated the greater portion of the time by Bernard R. Clutter and part of the time by John Cummings. The bottom was closed when this drop bottom bucket rigidly attached to the instroke ditcher stick was used, by a combination of operation of the pull line and lifting line a motion was imparted to the scoop whereby by the momentum of the open swinging bottom there automatically resulted the snapping shut of the bottom, being engaged by the latch at the back of the scoop. As I recall this Keystone machine was used on the Joplin Supply Company job, having a drop bottom scoop rigidly attached to the instroke ditcher stick, approximately six or seven weeks. The excavation work by our firm on this Joplin Supply Company job was completed about the middle of March, 1920. Defendant's Exhibit No. 28 which has been handed me is a photostatic copy of a paper dated March 18, 1920. I believe this represents the final statement tendered by Wallower Brothers to C. A. Dieter for services rendered. The services rendered was the work of completing the excavation of basement, for the Joplin Supply Company building at Third and Joplin Streets, Joplin, Mo. The statement is receipted as having been paid in full by C. A. Dieter to Wallower Brothers, and I believe that is correct.

The Keystone excavator having the rigidly attached drop bottom scoop on the instroke ditcher stick accomplished the excavation work as compared to the pivoted type of instroke bucket that had been previously used on this job, in a greatly improved manner. This work was improved by this rigidly attached drop bottom bucket on the instroke ditcher stick, by facilitating the dumping of sticky, clayey and other material from the scoop, and also by being able to more accurately dump the material in the wagons with less spillage and less delay than was formerly encountered.

After the Joplin Supply Company job was finished, the machines were stored for several months and then disposed of by sale, but I do not recall to whom they were sold, nor do I recall what disposition was made of the attachments. After this job was closed there were no immediate prospects for use of the machine in the same manner as used on this job. That was the reason we offered them for sale. As I recall the skimmer scoop which was used as a rigidly attached drop bottom bucket on this instroke machine had side rake teeth that were attached only to the drop bottom of the scoop.

I recall that there were frequently various employees of the Keystone Driller Company observing the performance of the excavator employing the use of the rigidly attached drop bottom instroke ditcher scoop on this Joplin Supply Company job at Joplin, Mo. I recall the names of Mr. Oliver and Mr. Lysle Hazen who saw this drop bottom ditcher scoop in operation and who were I believe general manager and shop superintendent respectively of the Keystone Driller Company.

Cross Examination by Mr. Edgerton.

I would say approximately sixty per cent of the excavation on the Joplin Supply Company basement was made by the use of the skimmer scoop of the type first employed. I would say that approximately five per cent of this excavation was completed by the standard instroke ditcher of the type illustrated in Defendant's Exhibit No. 24, which is the pivoted bucket. I believe the name of the fireman on this machine when the standard instroke ditcher attachment was used was John Cummings. The latch and dumping cable on the standard instroke ditching machine was operated by either John Cummings or the team foreman. I wish to correct this statement. As I recall, the latch mechanism on the standard form of pivoted instroke ditcher was operated by the shovel operator himself. Two machines were used on the excavation of the Joplin Supply Company basement, part of the time.

Q. Referring now to the rigidly attached drop bottom bucket on the stick of the instroke ditcher will you please state whether or not you encountered any difficulties with the latching mechanism after the scoop was mounted upon the stick? A. It was found that the latch mechanism as formerly used on the skimmer scoop was

not entirely satisfactory, and it was modified and changed somewhat to a more satisfactorily working mechanism.

Q. Is it not true that several modifications were made in the latching mechanism? A. Some minor subsequent changes were made until the latch mechanism was reduced to a satisfactory operative condition.

Q. Will you please describe the manner in which the final form of latch was operated to release the spoil from the bucket? A. I am unable to recall the details of latch mechanism as finally evolved.

Q. Do you remember where the operator stood or was positioned who released the latch in the final form of mechanism employed? A. It was necessary to have a man present at the side of the machine in order to direct the position of wagons to be loaded and to perform incidental work about the machine so that it was convenient for him to operate the latch mechanism by means of a rope to the point he was accustomed to stand in directing the teams so that it was not considered advisable to detract the attention of the machine operator by tripping the bottom of the bucket.

Q. Do you remember how long that tripping rope was? A. As I remember, the rope was about twenty-five (25) feet long, but the latch was operated at varying distances from the scoop.

Q. Will you explain please how you prevented this rope from becoming entangled with the teeth of the scoop during an excavating cycle? A. Ordinarily the workman who operated the latch stood at a position in front of the horses attached to the wagon and consequently back of the scoop during its digging operation so that the rope was always at a point remote from the teeth and therefore did not become entangled.

Q. And I take it that this operator kept hold of the rope and paid it out during the movement of the scoop, is that right? A. That is correct, and also recovered it as the scoop swung toward him.

Q. And this was the final mode of operation you used? A. Yes.

Q. Did you ever encounter any difficulty with the hinges on the drop bottom bucket? A. The pivot hinges for the drop bottom? No, not as I remember.

Q. Did the bucket ever spring crosswise and prevent the latch from holding? A. Very rarely after the latch mechanism was improved. Not sufficiently often to warrant any additional stiffening device.

Q. Was the bucket transversely braced to prevent springing or warpage adjacent its open end? A. No, it was not considered necessary.

Q. Did the Keystone Company provide the block of wood that was inserted to block the sliding latch as illustrated in Defendant's Exhibit 26? A. They did not as I remember.

Q. This block then was put on the attachment after the bucket was returned to the job, was it not? A. Either then or while waiting for the scoop to be returned from the shop.

Q. Was it not inserted after the machine had been in operation and it was found that the clamping of the brace bars were inadequate? A. I believe the latch mechanism as used on the standard form of instroke ditcher was found to be inadequate to make the position of the scoop rigid with respect to the ditcher stick on account of its worn condition so that the block of wood was inserted in order that there be no movement of the sliding pin. I believe the attachment was used first utilizing the latch mechanism only for rigidity and then was changed according to the foregoing.

Q. Do you recall any othe difficulties encountered with the drop bottom bucket rigidly attached to the instroke ditcher stick? A. No.

Q. Is it not a fact that the excavating machine provided with the standard skimmer scoop was put back into the excavation to finish up the job before the completion thereof? A. I believe that is true, for the purpose of cleaning up some dirt left by previous excavating.

Q. You had two excavating buckets of the drop bottom type made, one to fall back on in case of breakage, did you not? A. Both excavating machines used were equipped with a skimmer scoop, which provided a spare scoop for emergency when using one machine. Any piece of equipment is subject to wear and tear, such as wearing out of teeth or wear of rivets, etc., and it was considered advisable to have a spare scoop ready for use.

Q. Referring again to the drop bottom bucket which was rigidly attached to the ditcher stick, was the latch mechanism ever reduced to a positively acting form? A. I would say that the latch mechanism as developed fulfilled requirements for completing the operation as was required, by the sub-contract in question.

Q. Was the latch reduced to a properly protected form? A. I do not understand your question.

Q. As finally employed was the latch mechanism free from wear occasioned by engagement with the material in which it was working? A. I believe there was a strip of iron riveted to the bottom of the scoop in such a way as to prevent direct contact between the material excavated and the latch mechanism.

Q. But you are not sure about that? A. I believe I can definitely state that to be a fact.

Q. Did the side rake teeth to which you referred in direct examination and which were located on the bottom of the scoop as a matter of fact, protect the pivot hinge? A. As I remember the side rake teeth were flared outwardly providing a certain clearance beyond the sides of the scoop and served to protect the hinges for the bottom.

Q. Do you know whether the angle of the flared out teeth was great enough to cut a clearance for the protuberances beyond the outer sides of the scoop? A. I do not remember what the full clearance was.

Q. At the completion of the basement for the Joplin Supply Company, did you abandon further work on the scoop? A. I do not quite understand the meaning of the word abandon as referred to.

Q. Well, did you do any more work on the scoop of the type having a drop bottom and rigidly attached to the instroke ditcher stick? A. On the completion of the job, there was no further necessity of doing any work on the scoop.

Q. I'm sorry, but you haven't answered my question? A. I believe this answers your question.

Q. Then I take it that you did not do any further work on the scoop? A. That is true.

Q. And never saw this scoop in operation again? A. Do you mean this particular scoop or others of the same type?

Q. I mean either of the two scoops you used on the Joplin Supply Company job? A. As explained before on completion of this job the machines were stored and later sold and attachments also disposed of so that I never saw these particular scoops again.

Q. And you returned to Keystone for credit as many of the regular Keystone ditcher parts as were undamaged by the experimentation.

Mr. Mahoney: I object to the use of the word "experimentation" because the testimony of this witness shows that there was nothing experimental about the use of the rigidly attached drop bottom scoop on the instroke

ditcher on the Joplin Supply Company job because it has been shown by the testimony that the said attachment successfully completed an excavation that a Keystone device put out as a commercial piece of equipment was unable to do.

A. I do not remember what parts were returned for credit as I had nothing to do with this transaction.

Q. Will you describe please the character of the soil encountered in the Joplin Supply excavation job? A. The surface consisted of a tightly packed black top soil underlain by clay through which there were some streaks of gravel and shaley material. At the bottom of the excavation a bedding of limestone was encountered which in some places extended above the required depth of excavation. Some of the limestone could be excavated by use of the machine, other portions had to be broken up by shooting.

Q. Shooting is blasting, is it not? A. Yes.

Deposition closed.

(Certificate of Notary omitted.)

GEORGE A. GRETSER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is George A. Gretser. I am forty-seven years of age. I am service manager for the Osgood Company. I reside at 238 East Washington Avenue, Marion, Ohio. I have been connected with the Osgood interests 29½ years; ten years with the Osgood Dredge Company at Albany and the other 19½ years with the present organization at Marion, Ohio. The present organization of The Osgood Company at Marion, Ohio, purchased the old Osgood Dredge Company. The tracing which has just been handed me is a drawing for the dipper handle, of the dipper used on a phosphate excavator built in 1884 for the Pacific Guano Company, South Carolina.

Mr. Corbett: Your Honor, this has a bearing on the spacing of the channel and members of the ditcher stick, which is involved here.

The Witness: The home office of that company, by the way, though, was Boston, Mass.; the operation of the machine was in South Carolina.

(Narrative continued.) I have records to show that a dipper handle like that shown in this tracing was manufactured and sold by the Osgood Dredge Company. The tracing bears the machine number 157 which was sold under a contract which I have here to this Pacific Guano Company at Boston, and I have blue prints back there of the record that show that that was used on that machine. As to when this machine was paid for I have a bond that was canceled in September, 1885, between the Pacific Guano Co., Boston, Mass., and the Osgood Dredge Company of Albany, New York. This bond was conditioned that if the Osgood Dredge worked up to specifications to the contract, that the company would receive full payment, and this bond would be void. There is a red notation on the bond that shows it was canceled by fulfillment of the contract and payment of the money in full. The records I have just referred to were taken from the regular files of the Osgood Company. They are the original blue print records of the old Osgood Dredge Company at Albany, New York, and have been under my personal supervision and custody for—well, 27 of the 29 anyway. This other tracing which has just been handed me is of a dipper and handle of practically the same construction. The dipper is of the same construction, the handle being a little heavier than the other tracing which was 358 I believe. This one is drawing 484 and was used on three machines in addition to the original No. 157. A handle like this was furnished as a repair for 157 in addition. The Osgood Dredge Company's name was changed I believe in the year 1911; it was either 1910 or 1911, I couldn't swear which, but I think it was 1911. The Osgood Company of Marion, Ohio, purchased the old company out in 1911.

Mr. Mahoney: We will also offer a blue print in evidence for this, Your Honor.

Mr. Richey: What are you going to number these, Mr. Mahoney?

Mr. Mahoney: Well, we will number those the next Exhibit number.

Mr. Richey: This would be what?

Mr. Mahoney: This would be 68, and this will be 69.

(Narrative continued.) The exact or approximate date when both structures shown in Defendant's Exhibits 68 and 69 were manufactured and sold, the first drawing 358, used on machine 157, the machine was built in March, 1885. The other drawing there 484, that dipper and

handle was first used on machine 165 built in April, 1886. The one that I just gave you 165 was used again on machine 196. Those two machines I have just given, 157 and 165, were both for the same company, the Pacific Guano Company. That is the numbers of the machines. Then we built two more like this drawing 484; one was machine No. 196, built in June, 1891, and the other one was for machine 219, built in January, 1894, both for the Bolton Mines Company. The record to which I have been referring is an original record belonging to the old Osgood Dredge Company before the present Osgood organization purchased that company. This book is a recapitulation of the engine and various parts of the machine, and the costs which was carried by the general manager in making up estimates. This is the original record of John K. Howe, general manager of the old Osgood company. All of the machines show these structures here in these drawings 358 and 484 and were made and sold to the companies I have just mentioned prior to the time the present Osgood organization took over the old Osgood Dredge Company, according to the records which are the original records.

Mr. Mahoney: The drawing which has been identified by the witness, drawing No. 358, will be offered in evidence as Defendants' Exhibit 68, and the Osgood Dredge Company drawing No. 484, will be offered in evidence as Defendants' Exhibit 69, with the right to substitute blue prints for these original tracings.

The Court: Yes.

Cross Examination by Mr. Richey.

No, sir, I did not keep the records which I have just read from. In 1884 I was one year old. I was employed by the Osgood Dredge Company for ten years, and began to work for them in September, 1901.

Q. So everything you testified to here about this machine is just what you heard or deduced from the records you saw? A. Well, naturally; it was built before.

Q. You don't know of your own personal knowledge that these machines were built or sold, do you? A. Not from having had anything to do with them, no.

Q. Just from looking over these records? A. Well, from the fact that I have handled repair orders for the machines, I know the machines were in existence.

Q. But you never saw the machines? A. No.

Q. Now, you don't know whether these parts were used on inward arc machines or outward arc machines, do you? A. I don't just get what you mean.

Q. By the inward arc, or the outward arc, I mean the regular steam shovel that dug out like that.

The Court: Dug away from the machine.

Q. Dug away from the machine? A. Yes, that is the way those machines operated.

Q. You don't know whether or not they were actually used just as shown in these drawings, Exhibits 68 and 69, do you? A. Well, I presume so.

Q. But you don't know of your own knowledge? A. Yes, I am satisfied they were, because the parts we furnished for repairs would fit.

Q. But you never saw them in use? A. No, I never saw them in use.

Q. You don't know of your own knowledge whether they were used in the phosphate district or not, do you? A. Well, I just say that the names of the companies indicate that, and that the contracts state that they were handling that class of material.

Mr. Richey: I think all his testimony is immaterial, Your Honor; it don't amount to anything, anyway. We have no objection to the substituting of these blue prints, but we object to all the testimony.

Mr. Mahoney: Taken from the regular records, Your Honor, of this company, in the regular course of business.

RE-DIRECT EXAMINATION by Mr. Mahoney.

Q. Is the Osgood prepared at any time to supply orders for any of this equipment shown in these drawings?

Mr. Richey: I object to that as immaterial.

The Court: Well, trying to show the system, is all I suppose that shows.

A. Oh, certainly.

Q. And all these drawings were taken from the regular files of the Osgood Company, over which you have supervision and control, and you know that they came to the present Osgood Company from the old Osgood Dredge Company, which was purchased and absorbed by the present Osgood organization? A. Absolutely. I know that those have been in the same place, as I went to

work for them in 1901 and supervised the transferring of those records from Albany to Marion.

Mr. Corbett: Anything more, Mr. Richey?

Mr. Richey: No.

WALTER FERRIS, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Corbett.

My name is Walter Ferris. I am 63 years of age. I reside at Milwaukee, Wisconsin. I am Vice President of the Oil Gear Company. I am a mechanical engineer. As to my qualifications to testify with relation to the matters here in dispute, particularly my education and experience with mechanical matters are as follows. My mechanical training began with a four-year apprenticeship in a machine shop making paper machinery in Philadelphia, followed by two more years as machinist with the Link Belt Company, of Nicetown, Pennsylvania, making coal handling machinery. Then I entered Lehigh University at Bethlehem as a student in mechanical engineering, graduating in 1895. I then worked for about two years as assistant plant engineer, maintenance of rolling mill machinery in the Pencoyd Iron Works, near Philadelphia; then for approximately two years—I think it was a year and a half about—as mechanical engineer in charge of construction of mills and machinery for the Laflin & Rand Powder Company, which had plants at Kingston, New York, and in Wisconsin, and in Kansas. Then for about two years, more or less, I was working on my own account in the development of water meters for large city water pipes. That venture failed to pay, and I came to South Milwaukee, Wisconsin, in 1902, to take the position as draftsman with the Bucyrus Company, builders of excavating machinery of all types, or most types,—railway cranes, pile drivers, etc. About the following year I became chief draftsman, and later assistant chief engineer, and in 1911 chief engineer of the Bucyrus Company, in which position I remained until 1921, about the end of 1921. During my time as chief engineer of the Bucyrus Company we did some development work on attempting to find a way of transmitting power by pumping oil under pressure, with the idea of developing transmission machinery to operate excavating machine dippers or

scoops from gasoline engine drive. That development did not come to a mechanical success sufficient for its use on excavating machines, and in 1921, with some associates, we organized the Oil Gear Company to put this type of power transmission machinery on the general market. For the past ten years I have not been actively associated with the Bucyrus Company, but have given practically all of my time to the Oil Gear Co.

When I was with the Bucyrus Company I had a good deal of experience with patents and inventions and cooperated with attorneys in preparing patent applications. I took out several patents on my own account before going to the Bucyrus Company, on the water meter subject, and always, of course, more or less engaged in invention with the Bucyrus Company, and all of the patents taken out by the company after my connection with it as chief draftsman were taken out under my supervision. I don't know how many patents I have taken out. Somewhere between fifty and one hundred;—75 would be a guess.

The Bucyrus Company, when I was its chief engineer, was generally understood to be one of the two principal engineering concerns in the country, or in the world.

Q. What particular class of work—will you give some idea of the nature of the work that you were working on while you were chief engineer of the Bucyrus Company; what kind of excavating machinery, and where any of it was used, just briefly. A. Well, the first loading machines that were developed under my supervision particularly—I mean beginning with the time that I was chief draftsman when I had whole charge of the designing, was a line of large railway wrecking cranes. We built the first crane which would lift 100 tons, and later the first one which I think would lift 150 tons. We developed also railway pile drivers, which propelled under their own power; we did very extensive development of elevator bucket chain dredges for digging gold in California and Alaska; we were much the largest company in building gold digging dredges; we built all sizes, from 12 tons up—only one or two 12 tons—of outward digging steam shovels, what we call the railway type shovel, gradually developing up to 120 tons in weight, handling five or six yard dippers. We sold about 88 of those shovels to dig the Panama Canal. We later built three large dipper dredges for the Panama Canal which

were at that time I think the largest and heaviest dipper dredges ever built, handling 15 yard mud dippers and 10 yard rock dippers.

Q. Did you ever have any experience with coal stripping machinery or drag line devices? A. Yes. In about 1908 or '09, we began to take note of the tendency to go to the drag line—a revolving machine largely handling drag buckets, also capable of handling clamshell buckets, and other kinds. And we purchased at that time the business of a Chicago contractor of the name of James O. Hayworth, who had, in connection with his contracting, begun to make quite large drag line machines. That started us in the business of revolving machines which was actively developed from then on. In about 1910—these dates are a year or two uncertain—the Bucyrus Company purchased the business of the Vulcan Steam Shovel Company, of Toledo, and the Vulcan Company had just begun to put out rather large revolving shovels for coal stripping. Two or three of those shovels were in the field, giving some trouble, and we became responsible for them, and redesigned the line, and that started us in the large revolving shovels for coal stripping.

Q. Did you ever have anything to do with the designing of small revolving shovels? A. Yes; after purchasing the Vulcan Company, the concern was first reorganized as the Bucyrus Vulcan Company, and built a plant at Evansville, Indiana, for the building of small revolving shovels and machines exclusively. The engineering of that plant was also under my supervision, and we developed a line of small revolving shovels, beginning with about 15 tons weight, and going up to about 35 tons weight.

Q. Have you read the patent of Robert Rex Downie, No. 1,511,114, and have you read claims 6 to 14 of this patent? A. I have.

Q. Do you understand this patent, and the subject matter of these claims, in a general way? A. I think so.

The Court: Is that the drop bucket?

Mr. Corbett: That is the drop bucket.

Q. Please give your understanding of the subject matter of this patent, and particularly of claims 6 to 14 thereof, dealing with the subject matter of these claims in a general way, without taking up each individual claim. A. This shows the structure of the patent, as I

understand the question, and I have merely put it up to have (referring to chart on easel)—just let me have the question again.

(Question read.)

Q. In other words, just state the principal features of it. A. I would say that patent, in general, deals with a drop bottom bucket mounted on a ditcher stick or scoop-carrying member of an instroke ditching machine. The subject matter of the claims refers to the movements of the boom—a boom and its movement, a ditcher stick pivoted to the end of the boom, and operated by the hoisting line marked 18, and a digging line which has been cancelled—it looks as if it were 43. I will get the patent and see.

Q. Well, just call it a hauling line. That is clear enough. A. Digging line 43, operating the scoop 23, and having a bottom dumping door 25 through which the material excavated may be dumped, and controlled by the latch 35 and so on.

Q. Have you examined the prior art patents relating to this type of device sufficiently to say whether or not the idea of the scoop with a drop bottom door was old? A. I have.

Q. And if so, please discuss briefly a few of the patents that throw light on this question. A. A scoop with a drop bottom door is not new, but is old. The first example of this that I have on my list is a scoop covered in patent 493,421 to H. G. Butler.

Mr. Corbett: Your Honor, we are checking that to see whether that patent was used in the Cleveland suit.

A. (Continuing.) This scoop consists of the body side plates marked A, at the front of which is a U-shaped plow blade or cutter blade marked in general B.

Mr. Corbett: That patent was not in the Cleveland suit, Your Honor.

Mr. Richey: Is it in the answer here?

Mr. Corbett: It is a prior art patent, Mr. Richey; immaterial whether it is in the answer or not. It is prior art.

Mr. Richey: Well, I would like to have you say whether it was.

Mr. Corbett: Well, I really don't know.

Witness: It has a drop bottom door f, retained in load carrying position by a latch mechanism which is generally designed by d; it can be dropped to dump the

load. The bucket is specified to be carried and operated on the power machine by a suspension bale which is marked p. The bottom of this bucket is pivoted on a pin extending transversely across the bucket behind the plow or cutter B, and the side extensions of that cutter on the two sides of the bucket are formed to pass through the cut ahead of that pivot pin, thereby protecting it from damage from the sides of the cut.

Q. Any other patents that you have, Mr. Ferris? A. I have here a patent, reissue 11,516, reissued December 3, 1895, to W. Davy. This shows a scoop in which the side plates and the bottom are integral, so that when the bottom is dropped, the side plates are carried with it. It also is provided at its front end with a tooth structure or plow designated in general as—well, large F maybe, or large FC—I can't tell which from the drawing. There are side cutting lips extending all the way up the front end of this bucket on both sides, which are beveled inward to cut the sides of the—cut the material adjacent to the sides of the bucket and form a channel through which the bucket passes, and which will be wide enough not to wear on the pivot pins around which the structure revolves when dumping. This bucket is also retained in load-carrying position by a latched structure, generally indicated by f, and this latch structure is dumped by contact of a plunger mechanism, designated e, with the boom upon which the bucket is suspended. It is dumped by lifting the bucket up until this plunger strikes the boom, when the bucket will be tripped to dump.

Mr. Corbett: That Davy patent is not in the Cleveland suit, Your Honor.

(Narrative continued.) The chart drop bottom bucket is No. 806,288, patent to M. E. Pugh.

Mr. Corbett: That patent was in the Cleveland suit, Your Honor.

(Narrative continued.) In this bucket, the entire bottom is dumped, rotating around a pivot pin closely adjacent to the front or cutting end, and close down to the bottom of the bucket. It is retained in load-carrying position by a latch mechanism N-10, which is automatically dumped when the bucket is retracted into a position which tightens a chain attached to the hoisting sheave which lifts the bucket. This drop bottom carries digging teeth N-8, on its forward edge.

The next drop bottom bucket is shown, patent 1,107,899, issued to L. P. Clutter, August 18, 1914.

Mr. Corbett: That patent was in the Cleveland suit, Your Honor.

(Narrative continued.) This type is known as the skimmer scoop; also comprises a bottom dumping door 41, mounted on a pivot near the front end, and near the bottom of the scoop; and carrying at its forward ends earth-penetrating teeth 43. It is retained in load-carrying position by a latch mechanism 53, dropped by a dump line 55. This dumping line 55 has an extension 56, which was designed originally as a retracting line to enable the operator to swing the door shut.

The next one on the list is patent to Wagner, 1,225,537.

Mr. Corbett: That was in the Cleveland suit too, Your Honor. He is giving a general view here of the various drop bottom buckets in the field.

(Narrative continued.) This patent to George E. Wagner, No. 1,225,537, also shows the type of scoop similar to the skimmer scoop, used for the same purpose; has a drop bottom door latch X, latch mechanism Y, earth-entering teeth attached to the drop bottom; and also shows a pair of side-cutting teeth Z. There is no clear specification where they are mounted, but probably on the sides.

The next patent 1,316,058, to Pugh.

Mr. Corbett: That was in the Cleveland suit, Your Honor, patented September 16, 1919, M. E. Pugh.

(Narrative continued.) This shows a drop bottom bucket having a drop bottom 24 mounted on sides 19, revolving around a pivot pin 29, carrying earth-cutting teeth 25, and retained in load-carrying position by a latch 42, which is tripped when desired to dump by a latch lever 48. This dumping may also be automatically carried out through the attachment of a chain 45 to the bucket-carrying bail. This scoop is primarily designed for use on a drag line machine as shown.

The next bucket of this drop bottom type is shown in patent 1,339,606, issued May 11, 1920 to M. E. Pugh.

Mr. Corbett: That was in the Cleveland suit, Your Honor,

(Narrative continued.) This also is designed for use on a drag line machine and has the element of drop bottom 39, rotating around the pivot pin 58, carrying earth-cutting teeth 42.

Mr. Corbett: Just indicate that part with your pointer.

(Narrative continued.) 42. A peculiarity of this bucket is that the ordinary latch mechanism which has appeared in all the others at the rear end, is replaced by a toggle joint, indicated by the figure 60; and the load pressing down on the bucket produces a lengthwise stress against that toggle joint which holds the load up until the pull of the line breaks the toggle and the load goes on through. They have two forms, one with the toggle collapsing down, and one up. When the toggle collapses down, the bucket is tripped; so that the ordinary latch mechanism does not appear at the rear end on this bucket.

The next drop bottom bucket is shown in the patent to Morrison et al., 1,249,805.

Mr. Corbett: That patent was in the Cleveland suit, Your Honor, but we believe there was some misinformation relating to that matter.

The Court: Misinformation in what respect?

Mr. Corbett: Mr. Downie gave some testimony about that patent device, and I believe Mr. Ferris may clear that up. Some of the statements he made, we believe, are not correct.

(Narrative continued.) This bucket was designed for use with a large revolving shovel, the type used for coal stripping. It sometimes dumps 65 feet above the floor on which it digs. Ordinarily those shovels are used for casting over, that is to say, for swinging around and landing a load on a spoil bank. But there were some cases where it became desirable to load cars standing on the floor of the pit on which the shovel was working.

Q. Do you know something about the actual device of this patent? A. Yes. We built some of them while I was there.

Q. Who, the Bucyrus Company? A. Yes, sir; so that this bucket was designed so that when the scoop of the outward digging shovel, when we did not want to dump it on the high spoil bank, we could dump it on a pit, operating exactly as a drop bottom scoop of all the others we have mentioned.

Q. Do you recall any of the statements made by Mr. Downie in connection with that patent?

Mr. Richey: I think the record is the best evidence of that.

Mr. Corbett: We can compare what Mr. Ferris says with the record.

Mr. Richey: Objection to the question.

The Court: Just ask him questions along the same lines and see what his answers are. It is a matter of comparison.

Q. Would you say that the structure of this device of the Morrison patent is totally prohibitive of its use for a ditcher bucket? A. I would say not.

Q. Will you give your reasons why not? A. My reason is, I could put it on the bottom of the ditcher stick and ditch with it.

Q. Something was said by Mr. Downie about the lead of the bucket—

The Court: What you are interested in is the unloading, is it not?

Mr. Corbett: I just want to bring out the question whether or not—Mr. Downie's position was that this device could not be used in a back instroke ditcher.

The Court: For unloading or digging?

Mr. Corbett: For both,—either one.

The Court: All right.

Witness: I say it will work on instroke ditching.

Q. Mr. Downie indicates that one of the reasons it would not work on the instroke ditcher was that there was an excessive lead in the bucket—

Mr. Richey: I object to that question, having counsel interpret the testimony. He can ask him a question and ask for his opinion as to what this thing would do and what it would not do. You are interpreting his testimony.

Mr. Corbett: Do you object to it?

Mr. Richey: Yes, I am objecting to it.

Mr. Corbett: I thought you objected a minute ago because I did not call his attention to the testimony.

Mr. Richey: No, I did not. I told you you could ask this man things about the operation of this and compare it with the testimony.

The Court: And along the same lines as the Downie testimony.

Mr. Corbett: Yes. That is what I am trying to do.

Mr. Richey: But you are telling him Downie testified to so and so.

Q. In this Cleveland suit, Mr. Downie said "The lead of the bucket is 25 degrees; the lead of the ditcher bucket is 3 degrees, approximately. That may be varied to increase to 5 degrees, or diminish to 1. I have on this copy of the Morrison patent, drawn certain lines, which indicate that feature and others to which I shall refer, explaining what I mean by the excessive lead in the bucket. It is alleged that this bucket could be placed on a ditcher stick and used for cutting a trench. That is in error. For a number of reasons, the bucket will not even operate on an outward arc machine, as intended and described by the patentee." Will you state what your knowledge and experience is regarding those statements?

Mr. Richey: Objection to that, for the reason I already named, and partly because you only read part of what he said. I think it is objectionable to read it that way. You can go over the same identical ground for comparison.

Q. Will you explain just what was done with this Morrison bucket, whether or not it was ever built by the Bucyrus Company, and whether or not it was ever tested? A. Referring to this patent?

Q. Yes. A. Yes, we built one three-quarter yard size, mounted on a small revolving shovel with, I think, our 18-B, and tested it sufficiently to prove that it worked perfectly. That particular shovel bucket was not sold, and we later on built a bucket of somewhat modified design in the same general lines, but considerably modified, but operating the same way. That bucket was sold to two places where they wanted to dump in a pit; and for anything I know it is operating yet.

Q. Have you any illustrations of these other buckets that were built after the first Morrison bucket? A. Yes, sir, I have a drawing.

Mr. Richey: That is not according to the answer, is it?

Mr. Corbett: This is all prior art.

Mr. Richey: That may be. I am just asking you the question.

Mr. Corbett: No. The matter was just called to our attention a few days ago, as a matter of fact. It is not in the answer.

Mr. Richey: Then you simply rely upon it as part of the art?

Mr. Corbett: Yes.

Mr. Richey: That is what I wanted to know.

Witness: I have here a blueprint of tracing 35576, of the Bucyrus Company, print bearing date of January 31, 1918.

Mr. Richey: Had you not better qualify him on that before you get his testimony on it, to prove whether or not it is hearsay.

Q. Have you any actual knowledge as to the building of this bucket and the sale of it? A. I have actual knowledge as to the building of it. I know that it went out of the plant. As to whether it was sold or given away, I cannot tell you, of my own knowledge.

Q. What is the drawing number on the blueprint you have just produced?

Mr. Richey: Did you see the bucket?

Witness: Yes.

The Court: The important thing is, do you know whether it was put into operation, and whether it was working?

A. I practically know it was put in operation. I did not go out and see it operate. In the ordinary sense, I know it.

Q. It was sent out by your company to other companies, and never came back? A. It went out in the ordinary course of shipment. I know it operated, but I don't know whether I am competent to say so.

Q. If it had not operated successfully, you would have heard about it? A. I should say so.

Mr. Richey: Oh, objection.

The Court: That is a big order for him, to say that. It might have been burned up, or smashed up on the railroad.

Q. I hand you a photostat copy of a paper and ask you to state, if you know, what that is?

Mr. Richey: Have you the original?

Mr. Corbett: No, sir, we have not.

Mr. Richey: I think it is immaterial. I am going to object to it as secondary. Ordinarily, I would not, except that it is immaterial to anything in this case.

Witness: This is a—

The Court: Just a minute, what was it, Mr. Corbett?

Mr. Corbett: I think this witness has enough actual knowledge of this matter. I have not the original records here. They are not accessible to us.

Mr. Richey: Is it about this bucket?

Mr. Corbett: It is about this bucket, a blueprint, and we have a photograph showing the bucket made.

The Court: What do you want to show about the blueprint?

Mr. Corbett: I just want to show that the bucket was sold—actually sold for use. If it was made, it is enough, whether it was used or not.

Q. Have you any photographs of the bucket as actually made?

Witness: I have not finished the examination of this. I have a photograph of drawing 35576 which shows this actual bucket as constructed, assembled in the shop before shipment.

Q. Was that bucket shown in that photograph tested at the Bucyrus Company to your knowledge? A. No, sir, it was too big,—a six-yard bucket.

Q. You know it was made and sent out and left the plant? A. Yes, I know it was made. I know it was brought to the shipping point, and I suppose it was sent out. I did not see it around there afterwards.

Mr. Corbett: Your Honor, if this matter becomes important—it just came to our attention a short while ago,—and unless we can prove the original records of this sale, it becomes important and we may want to do that by deposition.

The Court: That is all right. You may do it by deposition. Then you want to withdraw this at this time?

Mr. Corbett: I will withdraw it temporarily.

Q. Do you know of any other drop bottom scoops that were in use—any actual knowledge of them—prior to the date of the first Downie patent? A. Other than the—

Q. Other than the— A. There is another of this same construction,—seven and one-half yards.

Q. Yes, but another besides the Bucyrus bucket or Morrison bucket? A. I have looked at others, but I have not memoranda of them right here.

Q. Did you ever see the Clutter drop bottom skimmer scoop in use? A. Oh, yes, I have seen it in use casually; I have seen lots of them in use.

Q. Have you read the deposition offered in evidence in this suit, and which relates to the developments made by one Bernard R. Clutter, at Joplin, Missouri, in the winter of 1919 and 1920? A. I have.

Q. Please briefly summarize and illustrate to the court what Bernard Clutter did in the making of the development described in his deposition, and in the depositions of the corroborating witnesses?

Mr. Corbett: Your Honor, we want to offer these blueprints and photographs in evidence.

Mr. Richey: Want the blueprint?

Mr. Corbett: Yes, 70 on the blueprint, and 71 and 72 on the photograph.

Witness: I offer his chart No. 20, showing three sketches: The upper one called sketch A, the middle sketch B and the lower one sketch C. Sketch A is practically a reproduction of the figure of the Clutter patent 1,317,431, showing the boom 15, ditcher stick 1, the pivoted scoop 2, all operated by hoisting line 21 and hauling line 23.

The Court: Where is 21?

Witness: The hoisting line is 21.

The Court: That is not a drop bottom bucket.

Mr. Corbett: That is the Leroy Clutter patent.

Witness: The Leroy Clutter. The whole scoop drops, the scoop being dropped by pulling on the trip line 9, which operates a latch 8, permitting the pin 5 at the upper end of these pivoted braces to slide down the slot and let the scoop drop down and spill its load. The sketch 2, or intermediate sketch, shows the skimmer scoop of the earlier Leroy Clutter patent, 1,107,899, in which the scoop rolled on a set of rollers in and out onto the boom, and the boom being set higher or lower or, generally speaking, about the level during the digging; and then being lifted to dump the load from the bottom by this scoop out into the wagon. The scoop would then be in a tilted position. As I understand it, these scoops from the skimmer machines then on hand at the Joplin site were immediately available adjacent to this machine which was then digging, without giving entire satisfaction, having trouble regarding the dumping of the bucket and breaking the wagon.

Q. This machine then digging—you mean of the Leroy Clutter type? A. The Leroy Clutter patent, yes; and what Bernard Clutter did was simply to take the—

Mr. Richey: Well, I don't think he has a right to review that testimony.

Mr. Corbett: He is just illustrating the chart.

The Court: He is trying to tell me what that testimony means if it is true.

Mr. Corbett: That is all. It is to make this simple for Your Honor.

Witness: The lower sketch C, shows the machine after the Bernard Clutter development. The difference between the lower and upper sketch is that in place of this bucket being allowed to rotate on those pivots to dump, it was placed on the same pivots and held in rigid position by the same braces, and a block of wood in here, so that it could not dump; and then the load is dumped by tripping the door, just exactly as it is done on the skimmer scoop. That is my understanding of the Bernard Clutter development as described in the deposition.

Q. Please compare the various part of this structure produced by Bernard Clutter at Joplin in the winter of 1919 and 1920 and this Bernard Clutter as a whole with the device which is shown and described in Downie patent 1,511,114?

The Court: That is the second Downie patent?

Mr. Corbett: That is the first Downie patent, drop bottom patent.

The Court: Oh, yes.

Witness: I have a comparative chart numbered 64, in which the upper sketch is reproduced from—

The Court: From the Downie patent.

Witness: From figure 2 of the Downie patent; and the lower sketch represents the Bernard Clutter development; and on this I have marked some letters and numerals used on another Bernard Clutter development to have them harmonize. The hoist line 18 of the Downie patent corresponds to the hoist line F of the Bernard Clutter; a link 16, to the links 8; pivot 15, to pivot J; ditcher stick 11, to ditcher stick I of the Bernard Clutter,—capital I. Pivoted to boom at a point 6 between the ends of the ditcher stick, corresponding to pivot point K; scoop 23 of the Downie patent corresponding to scoop 40 of the Bernard Clutter device; a drop bottom door 25, corresponding to a drop bottom door 41; on a pivot pin 28, corresponding to a pivot pin capital B; tripped to dump a load by latch mechanism 29 and 33 of the Downie patent, corresponding to latch mechanism 53 of

the Clutter development; and the scoop being hauled in by hauling line 43 of the patent, corresponding to hauling line capital D of the Bernard Clutter device.

Q. In order to illustrate the subject matter of the claims, of this first Downie patent, will you take claim 6 of the Downie patent and point out to the court, or read the claim, element for element, and point out the structure of the Downie device which corresponds to each element?

Mr. Richey: Of course we renew our objection to an expert reading the claims.

Mr. Corbett: I am just trying to show Your Honor what the Downie device is, and what claim 6 applies to; and then to show the comparison. It is merely a labor saving device for the court.

The Court: I understand what you are trying to do.

Witness: The first element in the Downie patent is a boom mounted for up and down movements, marked 2.

Q. What color? A. On chart 19.

The Court: What color, he said.

Witness: Boom marked red on chart 19, the numeral 2; and then a scoop-carrying member pivoted to the outer end of the boom at a point between the ends of said scoop-carrying member, the scoop-carrying member marked 11, shown in orange, and pivoted at point 6 to the outer end of the boom. The next element: A hoisting line engaging a pulley connected pivotally to the upper end of the scoop carrying member—that is that pivot 15—for controlling the up and down movement of the scoop-carrying member and boom.

Mr. Corbett: Will you read it on the chart there?

The Court: It is right there in front of you.

Witness: Yes: And in conjunction with the weight of the boom, for causing outward movements of the lower end of the scoop-carrying member—the downward pull on the boom acting on this pivot 6, tends to swing the scoop out. The next element is scoop 23, in blue, a scoop attached to the lower end of said scoop-carrying member, the attachment of the scoop to the scoop-carrying member being rigid and fixed throughout the entire cycle of operation, the inward end of said scoop being open. The scoop is held by the braces 20 from any movement relative to the scoop-carrying member, and the inner end is open. Element E, hauling line for drawing the scoop inwardly marked 43, and showing here on the

chart. Element F, a pivoted bottom for the scoop pivoted to the sides of the latter, the axis of movement of the bottom being arranged transversely of the scoop, and located adjacent to the open end thereof—all corresponding to the pivoted bottom 25 on the chart. And G, and an automatically engaging latch means for normally maintaining the bottom in closed position,—the latch means being indicated in the larger figure 2 by 29 and 33.

Q. Please take claim 6 of this first Downie patent and show the court whether or not it reads literally upon the structure of the Bernard Clutter development? Have you any illustrative chart showing the claim itself in conjunction with it? Do you have any chart, Mr. Richey?

Mr. Richey: No, that is the only one I have.

Witness: Reading the same claim: In an excavating machine.

Q. What is the number of that claim? A. Claim 6 of the Downie patent.

Q. Applied to what?

The Court: The Bernard Clutter development.

Witness: Applied to the Bernard Clutter device. Element A: In an excavating machine, the combination of a boom mounted for up and down movement,—shown in red; a scoop-carrying member pivoted to the outer end of the boom at a point between the ends of said scoop-carrying member,—shown in orange; a hoisting line engaging a pulley connected pivotally to the upper end of the scoop-carrying member for controlling the up and down movement of the scoop-carrying member and boom, and in conjunction with the weight of the boom—the hoist line pulls a pivotal connection D and scoop; attached to the lower end of said scoop-carrying member, the attachment of the scoop to the scoop-carrying member being rigid and fixed throughout the entire cycle of operation —the rigid braces—the inward end of said scoop being opened. E, a hauling line for drawing the scoop; F, a pivoted bottom for the scoop, pivoted to the sides of the latter, the axis of movement of the bottom being arranged transversely to the scoop and located adjacent to the opened end thereof—shown in dots there; and G, and an automatically engaging latch means for normally maintaining the bottom in closed position—as indicated here.

Q. Will you take claim 9 of this Downie patent, and see whether or not that claim will read literally upon the Bernard Clutter development? A. Claim 9, Downie patent 1,511,114, illustrated by chart 27. Element A—

The Court: Is this the Bernard Clutter device again?

Mr. Corbett: It is the Bernard Clutter device; it is a different claim, claim 9.

The Court: Yes, I know it is claim 9; but it is not labeled like the other one.

Witness: In an excavating machine, the combination with a tiltable boom—shown in red; and B, a ditcher stick pivoted at one end to the outer end of the boom—shown in orange; C, a scoop rigidly secured to the lower end of the ditcher stick at a point in rear of the scoop—shown in blue; D, and a drop bottom—shown in the dotted construction; E, pivoted to the sides of the scoop at a point below and in advance of the rigid connection F between the scoop and the stick—this and this are the rigid connection between the scoop and the stick.

Q. Have you any charts showing any other claims of this first Downie patent, illustrating the question as to whether or not they read on the Bernard Clutter development? A. Yes, sir.

Q. Please show the court.

The Court: How many of these claims do you claim read on the Bernard Clutter patent?

Mr. Corbett: Five of them read directly on the claims.

The Court: Which one does not?

Mr. Corbett: I think claims 7 and 8 have some minor variation, and I think one other may be.

Witness: Claim 12.

Mr. Corbett: We are sued on 6 to 14. 7 and 8 and 14, we are going to discuss and point out the differences, Your Honor.

Mr. Richey: Here it is, 7, 8, 11, 14, Mr. Corbett said did not read on this Joplin anticipation.

Mr. Corbett: I said they did not read literally on that.

Mr. Richey: You reserve the right to contend they are not patentably different from them?

Mr. Corbett: Oh, yes.

Witness: Claim 12, illustrated by chart 29. Claim 12 of the Downie patent 1,511,114. Element A: In an

excavating machine, a swinging boom mounted for up and down movement,—shown in red; B, a ditcher stick pivoted to the outer end of the boom and extended above and below the same,—shown in orange; C, a scoop rigidly mounted on the lower end of the ditcher stick—shown in blue; D, and provided with a drop bottom—shown in the dotted construction as before; E, means for pivoting said bottom to the scoop in advance of the rigid connection between the scoop and the stick,—shown by the arrow of the pivot point of the bottom; F, latching means for the drop bottom—shown at the right hand end of the scoop; G, a dumping line for operating the latching means —shown adjacent to the latching means; H, a hoisting line for the upper end of the stick for controlling the stick and the boom—indicated by this arrow; and I, a hauling line connected to the scoop—indicated here.

Q. How about claim No. 10, or any other claim you have there that reads on it? A. Claim 10, illustrated by chart 28. A: In an excavating machine, the combination with a tiltable boom,—is it necessary to repeat all this?

The Court: No, I would not think so.

Mr. Richey: It is all a farce, so far as I am concerned.

Mr. Corbett: Are you willing to admit—

Mr. Richey: No, I am not willing to admit at all; I contend none of the claims read on the construction.

Mr. Corbett: We would like to show Your Honor.

Mr. Richey: It is a matter of argument.

The Court: This does not help me materially. Take the charts, put them together, and ask him a general question. I don't think Mr. Richey will object to it on that particular ground.

Q. Which of the claims 6 to 14, in your opinion, read literally upon the Bernard Clutter development device in addition to those you have already named?

Mr. Richey: Objection to that because this man is not qualified to read claims, in the first place.

Mr. Corbett: He is giving his opinion.

The Court: He will give his opinion that these claims read as he has outlined on this chart.

Mr. Corbett: That is common practice.

Mr. Richey: If Your Honor wants to take it.

The Court: It will save time. You can cross examine him. These charts are helpful.

Mr. Richey: I think they are misleading, on the contrary, Your Honor.

The Court: That is for you to show.

Mr. Richey: All right, sir.

The Court: It seems so to me.

Mr. Richey: It is a matter of argument.

The Court: Yes, a matter of argument afterwards.

Q. You have named claims 6, 9 and 12. Which are the other claims?

The Court: I am just trying to save time. If you read all those, we will have to take a couple more nights here.

Mr. Corbett: It just places the matter before Your Honor.

The Court: I know. I can take those charts and in a few minutes I can see just what you are claiming about that.

Mr. Corbett: All right, Your Honor. That suits us very well.

Witness: I read claims 6, 9, 10, 12, 13 and 14 directly on the Bernard Clutter development.

The Court: You did not claim 14 in your opening statements.

Mr. Corbett: There was the possible question there about the side rake teeth.

Witness: That is true; I have a question mark as to the side rake teeth. I will have to withdraw 14; I would like to correct my testimony.

The Court: What charts have you there which illustrate the answer? Tell us which ones they are. Put them all together.

Mr. Corbett: I will just offer them in evidence.

Mr. Richey: Objection to them. They are immaterial.

Mr. Corbett: The illustrated charts 64-A, 27, 28, 29 and 30 referred to by the witness are offered in evidence, and requested that they be collectively designated Defendant's Exhibit No. 73.

Mr. Richey: I object to them as immaterial and I should like to be heard on it.

The Court: All right.

Mr. Richey: The matter of claim reading, in the first place, is the function of the court, and not of expert witnesses. This witness has a right to explain what these machines are and how he thinks they would operate. This matter of claim reading, the way it is done here, is misleading, because there is no interpretation given to the language of the claims. There is no ques-

tion of equivalency discussed. This witness does not know the rules of equivalency. He does not know how the language would be interpreted in the law. When we were up here on the motion for a preliminary injunction, my brother came up here with a lot of charts like these, with lines all through them, these very claims, and other claims in these patents directed to the prior art; and it was before the Court of Appeals and, according to this kind of scheme, the claims read right on the very prior art the Circuit Court of Appeals considered, and did not even consider worth mentioning in its opinion. That just shows how this case is being cluttered up with a lot of stuff that has nothing to do with the case and is not at all helpful, but is actually misleading to the court.

The Court: I think, Mr. Richey, the court has got to start some place, and these charts will help the court.

Mr. Richey: I say they are misleading.

Mr. Corbett: It is common practice. We are not asking this witness to pass upon any question of equivalency.

Mr. Richey: I have never been in a patent case loaded down with this kind of stuff in all the years I have been practicing.

Mr. Corbett: Maybe you should have been, Mr. Richey; maybe you would not have won the case in Cleveland.

Mr. Williams: The whole effect of Mr. Richey's objection is to the weight and not the competency.

The Court: It is along that line.

Mr. Richey: When we have a chance to argue this case, I do not want the Court of Appeals to think that I am going to load this case down with my witnesses on this kind of stuff. I want to know if I am going to have a chance to answer this in argument.

The Court: Certainly. This is just a step, to introduce the subject matter of the argument; and that is the way I see it.

Mr. Richey: Counsel can produce them and talk about them in his argument.

The Court: But if you objected to them, he would not have them in his record in the Circuit Court of Appeals.

Mr. Richey: If he will agree to use them down there, that may be different.

Mr. Corbett: You may not decide to appeal this case. There is no use in making that agreement now.

Mr. Richey: I hate to see a case loaded down.

Mr. Corbett: We can show you ample ground for it in the past practice, if necessary.

The Court: They are here. I am trying to save time. I think they will help to a certain extent. If they are misleading, you may explain that to the court as part of your argument. I do not see how you can be hurt any if they brought in one hundred of them.

Q. Will you refer to claim 7 of this Downie patent and discuss briefly what differences, if any, you find in the language of that claim; what differences you find between that language and the structure of the Leroy Clutter device?

Mr. Richey: May it be understood that I am objecting to all of this?

The Court: Yes. I suppose if none of these devices read upon these patents at all, that would be an argument in your favor as far as it would go, would it not?

Mr. Richey: I do not know that that amounts to a great deal. It is not a matter of reading words or drawings; it is a matter of substance.

Mr. Corbett: That is the first place to start.

The Court: It is. I am just asking you, as one lawyer to another, whether that would not be in your favor if they did not read at all.

Mr. Richey: I think so, yes.

The Court: Yes, just as it is a step in the opposite direction to show that they do. What it amounts to is a matter of argument, for your consideration. That is all I see about it at this time until I hear the arguments on the other side.

Witness: I am using chart 20 to illustrate this. Claim 7 of the Downie patent 1,511,114; the first element: In an excavating machine, the combination with a boom—15 of the Leroy Clutter patent 1,317,431—having spaced portions at the outer end; said spaced portions carrying a transversely arranged pivot pin—which is also shown—of a ditcher stick—marked 1 and shown in orange—of structural steel comprising two spaced channel beams. I have no way of telling from the drawings of the Leroy Clutter patent accurately what the construction of the ditcher stick is.

Mr. Richey: How can he read a claim on there when he says he does not know what it is.

Mr. Corbett: He is talking about the Leroy Clutter structure, not the Bernard Clutter.

Mr. Richey: It is the same stick, as I remember the testimony.

The Court: He said he cannot tell whether it is.

Mr. Corbett: You admit the stick of the Leroy Clutter device is the same as the—

Mr. Richey: No, I do not. I do not know what the proofs are. Go ahead. He said he did not know what it was.

Witness: So far as I see, the functioning of the stick is not dependent upon those provisions in the claim.

Q. What provisions in the claim? A. That the ditcher stick shall be of structural steel comprised of two spaced channel beams.

Q. I hand you herewith Defendant's Exhibits Nos. 68 and 69, which purport to be tracings of a ditcher stick marked by the Osgood Dredging Company in the years 1884 and 1885, and ask you to briefly describe that structure to the court, with particular reference as to whether or not these spacings show spaced channel beams in a scoop-supporting stick? Please take up each exhibit separately. A. Drawing No. 484, Defendant's Exhibit No. 69, shows a dipper stick supporting a dipper, and specifies that the length of the channel composing the dipper stick is 23 feet—

Q. I just want you to point out to the court whether or not that structure shows spaced channel beams. A. It does show spaced channel beams.

Q. Refer to the next exhibit and point out to the court any cross section on either of those exhibits which shows that spaced channel beam structure. A. The spaced channel beams on the exhibit named are shown in sections A-B, and C-D. On the other drawing, Defendant's Exhibit No. 68, the legend specifies or shows that the stick is made of channels 8 inches wide, one-quarter inch thick, and two inch flange.

The Court: Your answer is yes?

Witness: The answer is yes. I don't see a cross section on this drawing. The specification is perfectly clear.

Q. What would you say is the normal purpose of producing a structure of spaced channel beams instead of the I-beam or solid rod,—speaking as an engineer? A. Usually, to make a stronger structure.

Q. Something is said in this claim 7,—the latter part of the claim specified,—said pivot pin transversely con-

necting the space portions of the boom to the opposite side of the said bracket, whereby a long pivot and bar therefor is provided between the boom and the ditcher stick. In your experience as the head of the designing department of a shovel company, and as an engineer generally, is it, or is it not, common practice to provide a bar of adequate length to resist all stresses to which it may be subjected? A. It is.

Q. Will you refer to claim 14 of this Downie patent, No. 1,511,114, and briefly discuss the difference, if any, between the Bernard Clutter structure and the structure defined by this claim?

The Court: You claim everything reads upon it except the side rake teeth; is that it?

Mr. Corbett: In claim 14, yes, sir.

Q. Are side rake teeth shown in the Leroy Clutter development, and if so, what structure, and where were they mounted? A. That element does not correspond with rake teeth fastened to the side of the scoop and overhanging the pivots on the bottom so as to protect said pivots.

Q. Did the Bernard Clutter development have side rake teeth? A. Yes, but not fastened to the side of the scoop.

Q. Did they overhang the pivot to protect the pivot? A. Yes. The language is that they projected.

Q. What is that? A. They projected to protect the pivots,—projected on the plane of the pivots.

Q. How about the language of claim 11? Anything, or any feature there that is not specifically shown in the Bernard Clutter development? A. No. Claim 11 specifies, said stick being composed of two spaced apart beams.

Q. I see; well, you needn't discuss that.

Mr. Corbett: Our position, so that it will be clear before Your Honor, without any argument on the matter, is that these changes in the claims 7 and 8 and 11 and 14 are merely mechanical skill.

Q. I would like to ask you if you have any prior art patents or publications showing the subject matter of claims 7 and 8, as you understand them? A. I offer chart 31, illustrating patent to E. J. Keith, No. 1,315,512, and to S. Hoar, No. 1,322,570. I think I will want to substitute another—just a minute, please, and see if I have another chart here. Pardon me,—I would rather use chart 63 first.

Q. Just discuss the structures of this chart generally with relation to claims 7 and 8, and state whether or not, in your opinion, these claims read literally on either one of those structures? A. This is the patent to S. Hoar, 1,322,570, which shows a ditcher stick composed of space channels, and having bearing brackets 17 secured to these channel beams, not literally secured to flanges 18, but immediately adjacent to them and having the same effect. It shows a scoop rigidly secured to the lower end of the ditcher stick and means connected with the channel beams to maintain them in spaced apart relation, and said brackets not secured to the inner flanges but adjacent to them, which are equivalent in function to this claim 7—the equivalent in function.

Mr. Richey: Both the Keith and Hoar patents were in the Cleveland case. That is right, isn't it?

Mr. Corbett: I think they were.

A. (Continuing.) In this same chart the upper figure shows a photostat copy from the catalogue of the American Railway Ditcher Company—is this an exhibit?

Mr. Mahoney: Not yet.

A. (Continuing.) American Railway Ditcher Company, showing a ditcher stick having a—

The Court: It is the same thing as up there (referring to chart No. 63).

Witness: Yes.

The Court: Well, then use that up there.

A. (Continuing)—showing a ditcher stick rigidly secured,—or scoop rigidly secured to the lower end of the ditcher stick, composed of spaced apart channels with brackets attached to the upper end, embracing a pivot across the lower part of the boom. I might comment that the whole structure seems to be much wider and more rigid than the structure indicated in the drawings of the patent.

Q. What has been the practice throughout your experience in the event that a scoop designed for light digging, in loose soil, was to be used for heavier digging, such as in soils containing rocks or the like? A. Put teeth on it, if it is heavy enough to carry them, and if it is not, make a heavier scoop.

Mr. Corbett: Your Honor, I said a moment ago that I thought this fourth patent that was mentioned was in the Cleveland suit, No. 1,322,570. Our record indicates

that it was not in the Cleveland suit, as we have checked up on it.

Mr. Richey: 1,322,570?

Mr. Corbett: Yes.

Mr. Richey: Why, here it is in the record, Court of Appeals, page 1022.

Mr. Mahoney: It is not set up in the answer.

Mr. Richey: Well, that might be.

Mr. Mahoney: I don't see it in the list of our exhibits here.

Mr. Richey: Well, see if it is in the index. Yes, it is in the index.

Q. (By Mr. Corbett.) Have you read and do you understand the third Downie patent, No. 1,709,466, issued April 16, 1929? A. I have read it, and I think I understand it.

Q. Please refer to claims 1, 2, 8, 10, 11, 12, 13, 15 and 19, upon which the suit is here brought, and state in a general way what those claims relate to.

The Court: Is that the assembly patent?

Mr. Corbett: Yes, the assembly patent. That is the third Downie patent, No. 1,709,466.

A. These claims relate, in a general way, to the detachable mounting of a scoop rigidly upon the ditcher stick.

Q. Have you read, and are you familiar with, the patents set up in defendant's answer against this third Downie patent? A. I have read some of them, and am familiar with them.

Q. Please take such of these patents as you have read and are familiar with, and compare some of them with the structure of this Downie patent, with particular relation to the subject matter of these claims 1, 2, 8, 10, 11, 12, 13, 15 and 19.

Mr. Corbett: Your Honor, the witness is having difficulty to locate a certain group of patents, and if you don't mind, I will withdraw that question, and take him into some other matters so as to keep going here.

The Court: All right.

Q. Does defendant's structure, that is, the Osgood structure, embody spaced brackets connecting the inner flanges of the channel beams to make up the ditcher stick? A. It does not.

Q. Have you any drawings of the Osgood structure?

(Witness produces chart.)

Q. Is this a drawing of the Osgood structure? A. It is, but doesn't go up far enough to answer the question.

Q. Or is it a drawing of the General Excavator structure? A. That is a drawing of the General Excavator structure. I am sorry.

Q. Please take the drawing of the Osgood structure, if you have one. A. This is a drawing showing connections of the ditcher stick to the Osgood scoop, not extending high enough to answer the question which you have just asked about the space bearing.

Q. Have you a photograph showing the structure which will enable you to point out to the Court whether or not the Osgood Company uses spaced brackets secured to the inner end of channel beams, in the inner flange of the channel beams? A. I have a photograph which shows a full width bearing upon the stick in this photograph.

Q. Does it show space brackets? A. It has no space brackets; the bearing goes entirely across.

Mr. Corbett: Just show the Court that photograph, if you will, please.

Witness: And I have personally inspected other ditcher sticks which have the exact construction, and I know the standard bearings extend from one side to the other, on all of them.

Q. What is the purpose of the spaced arms 5 at the outer ends of the boom shown in the first Downie patent, No. 1,511,114? A. I would presume they are there to lengthen the boom and to support the ditcher stick.

Q. Are those spaced arms removable? A. They are.

Q. Do you find any such removable arms in the Osgood structure? A. I do not.

Q. What is the purpose of removing these spaced arms from the boom in the Keystone structure, if you know? A. It makes a convertible structure, in which the skimmer scoop can be run on the same boom.

Q. Then the spaced arms are removed in converting from the ditcher to the skimmer scoop; is that right? A. That is my understanding.

Q. So as to obviate or avoid interference of the rollers which roll in the channels of the boom; is that right? A. That is my understanding of it, yes.

Q. In the Osgood structure, would you say that the scoop is rigidly secured to the lower end of the ditcher stick at a point in the rear of the open end of the scoop?

A. No, it is secured at the point flush with or at the open end of the scoop.

Q. Does defendant's structure embody a swinging boom mounted for up and down movement? A. In the art, a swinging boom is generally understood to refer to a one-handed machine in which the boom swings to and fro to an angle of 180 degrees, or approximately.

Q. Does it have rake teeth fastened to the side teeth, which rake teeth overhang the pivots on the bottom? A. No.

(Narrative continued.) I will now take this Downie patent and show the structure of the teeth thereof with respect to this overhanging feature, and compare it with the structure of defendant's side rake teeth. To make this definition of the patent clear, I refer to chart 103, which shows the tooth as specified in the patent, mounted on the side of the structure, of the dipper,—side of the scoop—and extending over and projecting beyond the pivot pin. The structure of the Osgood bucket includes or comprises a flat chisel-bladed tooth which is both above and below the pivot pin, with the pivot pin passing through it. As a designing engineer, the explanation I would give for the selection by the Keystone Driller Company, or by Downie, of that particular type of tooth is that it is easier to make and cheaper.

Comparing the structure of the Osgood ditcher stick with the structure of the ditcher stick shown in the first Downie patent, the Osgood ditcher stick is composed essentially of three channels.

The Court: This chart is Osgood that you have here now?

A. (Continuing.) This chart, No. 103, is a prospective, to get a view of the Osgood stick construction, with its connection to the scoop. The stick is composed of one large channel on the side away from the mouth of the scoop, having riveted to it two smaller channels, and the opposite flanges of these channels being closed by a covered plate, making a solid structure roughly four-sided, square structure, especially adapted to have the maximum torsional strength and the maximum bending strength.

Q. Please compare that with the Downie structure. A. 1,511,114, first Downie?

Q. Yes, 1,511,114. A. Comparing this with the stick structure shown particularly in Figs. 3 and 4 of this

patent, connecting bars 13, or batten plates, as they are usually called, only very inadequately connecting the two main channels of this structure to develop their strength as a unit. The other members, the additional members used in the Osgood structure, make it very much stronger.

Q. Without comparing the relative merits of the structures, just point out briefly the differences, if you have not already done so. A. Well, the differences are simply the open structure of the two channels connected by plates, as against the closed box structure.

Q. Now much has been said in this case by Mr. Downie and others about the question of rooting. It is supposed to cover the dropping of the bottom and digging first with the downwardly projecting side rake teeth, and then closing the bottom and digging with the scoop as a whole. Will you point out to the Court whether or not in your opinion, the structure shown in the Downie patent No. 1,511,114 is capable of rooting, giving your reasons in answering this question? That is, capable of rooting as explained by Mr. Downie. A. As I understand rooting, as explained by Mr. Downie, and as illustrated in the Keystone test out at the Davis coal yard, rooting implies side teeth, which are able to project downward into the cut beyond the level or plane of the teeth attached to the open door. The teeth shown in the patent 1,511,114 will not do this, but come several inches short of reaching; which I have illustrated by chart No. 103, showing the scoop dragging along the surface with the door open, and with the overhanging side rake teeth reproduced approximately to scale on the chart. As I understand it, this would not give rooting effect.

(Narrative continued.) The point I make is that the teeth are so short that the point on which the side rake tooth swings in an arc, is always within the bottom of the bucket as long as that bottom of the bucket is open and lying on the ground.

I have read this Downie patent in an endeavor to find anything in the patent specification or claims indicating that the Downie device was intended for, or capable of, rooting, and I find nothing in the patent specification or claims on this subject. It is my opinion that this patented structure shows nothing either in the drawings or the specification that indicates it would be capable of the rooting action as described by Mr. Downie. I cannot go back to all descriptions of Mr. Downie and check against them, however.

Q. I refer you again to the third Downie patent No. 1,709,466, and particularly refer you to the foot members 27, which are attached to the base of the ditcher stick in this Downie structure, and ask you to state whether or not you have any knowledge as to the novelty of use of angular brackets of this type at the time the application which resulted in this third Downie patent was filed. A. This ditcher stick, or any ditcher stick, as I see it, is simply a combination of structural shapes put together for a certain purpose, and that purpose in general is a column. The elements used in constructing this column are just the same as the elements used in the constructing of columns of a building or any other place where structural stuff is put together to accomplish an end.

Q. Have you any illustrations of the use of similar foot members, either in building construction, or in shovel construction? A. I have prepared a chart.

Mr. Mahoney: We offer in evidence the Osgood photograph carrying the number 3346 as Defendant's Exhibit No. 74. We also offer in evidence the title page of the American Railroad Ditcher Company catalogue, and the copyright on the page following that, showing copyright notice by the American Hoist & Derrick Company, of St. Paul, and also page 37 of that catalogue as Defendant's Exhibit 75.

The Court: They are all received, if there is no objection.

A. (Continuing.) To illustrate this matter, I have prepared a chart simply by photostating a couple of pages of the Carnegie Steel Company's handbook, which is in the hands of probably three-fourths of all the structural mechanical draughtsmen of the country; everybody works from that.

Q. What is the copyright date of that book? A. This is a 1917 copy.

Q. And this chart No. 46, is it? A. Chart No. 46 and 45 illustrate just 2 pages from that telling how to make columns.

Q. What pages? A. Chart 46 refers to page 297, and chart 45 refers to page 246.

Q. In your practice with the Bucyrus Company, it was customary to connect the ditcher sticks or the scoop sticks to the scoop by means of castings and cross-pins; is that not correct? A. Yes, sir.

Q. What is your idea, as an engineer, about the reason for the use of this structural steel connection as used in the Downie structure, instead of the casting? A. To save the cost of the casting.

Q. In other words, it is your opinion that the structural steel connections of this type are considerably cheaper than the castings; is that right? A. Very much cheaper.

Q. And in your opinion, did that probably instigate the use of structural steel members to effect this connection? A. That would be my reason for doing it.

Q. And in the ordinary work of the designing or draughting room of a company of this type making shovels, is it the custom for the draughtsmen or designers to be on the lookout for patents covering various arrangements of braces or angle clips before proceeding to construct a column to connect it to the scoop? A. We would certainly never have to watch out for anything mentioned in this patent as a construction for the ditcher stick.

Q. Just what do you mean by that? A. I mean that we would not expect to run into patented construction in merely latticing together, or spacing or joining in any way structural shapes to make a column adapted to the purposes to which it was to be put.

Q. In other words, it is customary in designing structural work of connecting the structural steel work of a column to another member, or of a stick to its scoop, to utilize any desired form of arrangement of clips or braces to make that connection; is that right? A. Surely.

Q. And when you do make that connection, you place your braces in such a way as to resist with best effect torsional strains or twisting or other strains to which the device being made is likely to be subjected; is that right? A. That is right.

Q. This third Downie patent makes a point of the fact that certain bolts are used for getting the ditcher over in tension. Please briefly state what you understand to be meant when it is specified that the bolts are in tension or when it is specified that the bolts are in shear. A. Well, literally when a bolt is in tension, it only receives a force in that direction (indicating). That pencil is in tension like that (indicating). It is the stress in the direction of its length. When it is in shear it is subject to stress tending to go in two crosswise.

Q. And in the designing in the room of a shovel plant, or a similar plant, what is the practice among en-

gineers in the excavating industry, we will say, regarding the use of bolts in tension and bolts in shear? How do they select those? A. So far as my experience and opinion go, we avoid putting fastenings in tension when we want them to be reliable, and put them in shear.

Q. You think that bolts in tension are not so reliable as bolts in shear? A. I think so, yes, generally speaking.

Q. And in the structures of the Bucyrus Company, in most of your shovels the pins which were used for connecting the casting to the scoop were in shear; is that right? A. Always; practically always.

Q. And did that, as a matter of fact, enable you to get a stronger connection than if your pins had been in tension? A. I could design a tension connection just as strong, but I wouldn't.

Q. Would you be free to use either one? Would you be free to use your bolts in tension or bolts in shear, in designing? A. I don't understand what you mean by "free".

Q. Would you expect to find some patent on the manner of arrangement of the bolts in tension? A. No.

Q. No, what? A. I wouldn't have thought of it. I would expect to be free to put them in tension on there.

Q. In other words, an engineer is free to place his bolts in tension or in shear, whichever way he gets the best results; is that the fact? A. Absolutely.

Q. You spoke of the Carnegie Steel book. I would like to call your attention to Defendant's Exhibits 68 and 69, and ask you to point out to the Court any structural features which you find in those tracings which correspond to the members 27 of Downie patent No. 1,709,466. These members 27 are shown best on Fig. 6, Sheet 2 of the drawings of this patent. A. Referring to Defendant's Exhibit 68, I find that where the dipper stick joins to the dipper, it is secured to the back plate of the dipper by angle clips, bolted through the webs of the channels, and bolted through the back plate of the dipper in a manner similar to that shown in the connection of clip angles 27 on Fig. 6 of the patent. The same remarks apply to both Exhibits 68 and 69.

Q. Would you say that those clip angles are substantially identical or not with the clip angles 27 on Fig. 6 of this Downie patent No. 1,709,466? A. I would say they are substantially identical in structure but the bolts are not subject to the same kind of stress, if that is of any importance.

(Recess to seven-thirty P.M., March 11, 1931.)

Mr. Corbett: Your Honor, the witness has not gotten over here yet, and Mr. Mahoney has several depositions that we put in meanwhile.

The Court: All right.

Mr. Mahoney: Your Honor, I wish to state that we wish to offer in evidence as merely part of the prior art, and will give it an exhibit number, all of the prior art patents that were discussed by any of our witnesses and that are not in our answer or referred to in our depositions. We are collecting them together, Mr. Richey, and will give you a copy of them.

The Court: All right. We might consider them all in, or you can offer them when you get the list made up.

Mr. Mahoney: Well, we just want to make sure that we have them in the record.

The Court: If anybody fails to offer an exhibit, you can do it any time before you close your case,—or even after that.

Mr. Richey: Is this Exhibit 62?

Mr. Mahoney: We have this Exhibit 62, all of our prior art patents listed in our answer, and you know we cut down our list somewhat, although the patents themselves are still in the book. I wish to make that an exhibit, however, of the prior art patents.

Now, we have got some depositions here, and we wish to offer in evidence the depositions of Ben S. Thompson, Clarence Yardley and W. R. Lawrence, and Defendants' Exhibits 56 and 57 that were offered in evidence at the time those depositions were taken. Defendants' Exhibit 58 is also offered in evidence. Defendants' Exhibits 59 and 59A are also offered in evidence. Defendants' Exhibit 60 is offered in evidence. I think that is all right now.

DEPOSITIONS FOR THE DEFENDANTS

Taken at Columbus, Ohio.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building,
Cleveland, Ohio.
Attorneys for Plaintiff:

Please take notice that defendant herein will take the testimony of the following persons:

Ben S. Thompson, 1919 Cambridge Blvd., Columbus, Ohio
Clarence Yardley, Kileville, Ohio
W. R. Lawrence, 248 E. Como Avenue, Columbus, Ohio

all of whom reside more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Karl R. Meredith, notary public in and for the County of Franklin, Ohio, who is not of counsel nor interested in this cause, at the office of Corbett & Mahoney, 820 Huntington Bank Building, Columbus, Ohio, beginning on the 30th day of December, 1930, at ten o'clock a.m., and thereafter from day to day as the taking of the depositions may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated December 26, 1930.

Service of a copy of the foregoing notice acknowledged, this 27th day of December, 1930.

RICHEY & WATTS,
Attorneys for Plaintiff.

PRINTER'S NOTE:

A like Notice was issued on behalf of the General Excavator Company and was signed by Mr. Edward L. Reed.

The following depositions were taken on behalf of both defendants, pursuant to the above notice, at the office of Corbett & Mahoney, 820 Huntington Bank Building, Columbus, Ohio, before Karl R. Meredith, notary public in and for the County of Franklin, Ohio, commencing at ten o'clock a.m., on the 30th day of December, 1930. Counsel for all parties being present.

W. R. LAWRENCE, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is W. R. Lawrence. I reside at 248 E. Como Ave., Columbus, Ohio. I am 42 years of age. I am a photographer, and have been engaged in that business for 24 years. I am employed by the Service Photographic Company. The photographs which have been handed me and which have been marked by the notary for the purpose of identification as Defendants' Exhibits 56 and 57 are photographs of a steam shovel, taken at Star Road and Flanagan Pike by me on December 27th, 1930. I developed the negatives from which these photographs were made. These negatives are now in my possession. The photographs were developed from the original negatives. These photographs marked for identification as Defendants' Exhibits 56 and 57 correctly and accurately represent the machine which they purport to show. Both photographs represent the same machine. Referring to photograph 56, this is a photograph of the scoop shown in Exhibit 57 and taken from the rear of the bucket.

Mr. Mahoney: Photograph, marked for identification as Defendants' Exhibit 56, which has been identified by the witness is hereby offered in evidence and the notary is requested to mark the same as "Defendants' Exhibit No. 56, photograph of dipper bucket of a Thew shovel located at Star Road and Flanagan Pike, Columbus, Ohio" and photograph marked for identification as Defendants' Exhibit 57 is hereby offered in evidence and the notary is requested to mark the same as "Defendants' Exhibit No. 57, photograph of Thew Steam Shovel located at Star Road and Flanagan Pike, Columbus, Ohio."

Mr. Edgerton: The exhibits 56 and 57 are objected to as immaterial and irrelevant.

Mr. Edgerton: No cross examination.

Deposition closed.

BEN S. THOMPSON, a witness, called by the defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Ben S. Thompson. I reside at 1919 Cambridge Blvd., Upper Arlington, Ohio. I am engaged in the real estate business. I am 52 years of age. I have been connected with the Northwest Boulevard Company since its organization, I cannot remember the date, but I think 1915 would be correct.. I am president of the company. This company is engaged in subdivision of lots. In laying out subdivisions the Northwest Boulevard Company had occasion to use a steam shovel, and this steam shovel was owned by the company. The photograph, Defendants' Exhibit 57, is a picture of Thew shovel, which the Northwest Boulevard Company purchased. That shovel was purchased by the Northwest Boulevard Company in the year 1916. That shovel is still in existence and is now located on North Starr Avenue, in the village of Upper Arlington, close to what they call Starr Road and Flanagan Pike. Our company still owns the shovel shown in photograph Defendants' Exhibit 57. We purchased this shovel from the Thew Shovel Company of Lorain, Ohio. The paper which was just handed me is a contract entered into with the Thew Shovel Company for the purchase of the steam shovel on October 11th, 1916. The contract was signed by me as president of the Northwest Boulevard Company. Subsequently, we received the shovel on that contract. I cannot give the exact date this shovel was received, but I think it was about the first of the year, 1917, but I am not sure, it may have been received before the first of the year, 1917.

The paper which was now handed me is a bill of lading for type O Thew Steam Shovel, complete, No. 1356, which is the number of the machine. This bill of lading is dated in the year 1916. The signature on the contract is my signature as president of the Northwest Boulevard Company.

Mr. Mahoney: The Order contract, dated October 11, 1916, between The Thew Automatic Shovel Company and the Northwest Boulevard Company, which has just been identified by the witness, and the Lorain, Ashland and Southern Railway Company bill of lading, dated 1916, consigning one Type O Shovel to the Northwest Blvd. Company are hereby offered in evidence as one exhibit and the notary is requested to mark the same "Defendants' Exhibit 58, contract dated October 11, 1916 between Thew Automatic Shovel Company, Lorain, Ohio, and the Northwest Boulevard Company, Columbus, Ohio, and memorandum bill of lading covering the shovel referred to in said contract."

Mr. Edgerton: The exhibit is objected to as immaterial, irrelevant, and insufficiently proven.

(Narrative continued.) The Type O Steam Shovel referred to in Defendants' Exhibit 58 is the same as the shovel shown in Defendants' Exhibit 57. My company actually used the steam shovel shown in Defendants' Exhibit 57 in laying out the subdivisions or work connected therewith. This shovel was used for ten years to my knowledge. I recall that Clarence Yardley and Charles Fowler operated this shovel for us. Our company complied with the terms of this contract, Defendants' Exhibit 58, and became vested with the full title to the shovel, about the year 1916 or thereabout.

No cross examination.

Deposition closed.

CLARENCE YARDLEY, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Clarence Yardley. I reside at Kileville, Ohio. I am 32 years of age. I am a shovel operator. I have operated Thew, Erie, and Koehring shovels. I operated a Thew shovel for the Northwest Boulevard Company of 52 West Gay Street, Columbus, Ohio. I began my employment with the Northwest Boulevard Company, in 1916, firing the shovel. The Northwest Boulevard Company is engaged in real estate development, subdivision work, and laying out lots in subdivisions. Defendants' Exhibit 57 is a photograph of the

Northwest Boulevard shovel. This is a Thew shovel, and the one on which I worked as a fireman when I first became employed by the Northwest Boulevard Company. This shovel is now located in Upper Arlington, in Northwest Boulevard and Wilshire Road. The road that runs across Starr Road where this shovel is located is now known as Chambers Road, and used to be known as Flanagan Pike. So that the shovel is now located near what was formerly called Starr Road and Flanagan Pike. The photograph, Defendants' Exhibit 57, correctly and exactly represents the shovel as it now stands. Defendants' Exhibit 56 is the bucket and part of the stick on the Northwest Boulevard shovel, shown in Defendants' Exhibit 57. The shop order number on the shovel shown in Defendants' Exhibit 57 is 1356. I operated the shovel shown in Defendants' Exhibit 57 approximately five years. During that time I was employed by the Northwest Boulevard Company as operator. While I was the operator the shovel was used in Northwest Boulevard subdivision and Upper Arlington subdivision, which are located northwest of Columbus, Ohio. Referring to Defendants' Exhibits 56 and 57, these photographs show the Thew shovel in the same condition, so far as the type of ditcher stick, boom, dipper bucket are concerned, as they were at the time I began work on the shovel in 1916, and as they exist today on the shovel located at Starr Road and Flanagan Pike, except with wear and tear on the parts. The Thew shovel shown in Defendants' Exhibit 57 is capable of being operated and run by one man. In the event that the shovel was operated by one man, the operator would be required to do his own firing. The bucket shown in photographs Defendants' Exhibits 56 and 57 could be removed from the ditcher stick. To go about removing the bucket shown in Defendants' Exhibits 56 and 57, I have marked two bolts "B" on Defendants' Exhibit 56 to be removed, then the "pin" to be removed.

Q. The removal of—or unscrewing the nuts on the bolts which you have marked "B" and then removing the bolts and then removing the pin that goes through the rectangular flange member and through the base casting on the ditcher stick would allow the bucket to drop off from the ditcher stick, is that correct? A. Yes, sir.

Q. The bolts which you have marked "B" run parallel to the ditcher stick arm, is that correct? A. Yes, sir.

Q. The bolts "B" go through the base casting at the end of the ditcher stick and also through the back casting on the dipper bucket, is that correct? A. Yes, sir.

Q. Can the bucket shown in Defendants' Exhibit 56 be removed from the ditcher stick in any other way besides that you have just described? A. Yes, sir.

Q. How can that be done? A. By removing these bolts I have marked "C" and dropping bucket, including arm, which extends up into the sleeve, which I have marked "D".

Q. What is the purpose of this plate or part which I have marked "E" on Defendants' Exhibit 56? A. That is to hold the dipper in place on stick "D".

Q. With the arrangement of parts shown in Defendants' Exhibit 56, is it possible to attach dipper buckets of varying widths to the ditcher stick "D"?

Mr. Edgerton: The question is objected to as calling for a conclusion.

A. Yes, sir.

Q. How could this be done?

Mr. Edgerton: This question is also objected to as soliciting an opinion, the witness has not been qualified beyond a fact witness and this line of examination is therefore objected to.

Mr. Mahoney: This witness has testified that he is an experienced shovel operator, having experience with various makes and types of shovels, and has also testified that he operated this shovel for five years, and should therefore be qualified to answer the question.

A. By removing the bucket as answered before in answer to Q34 and Q35, and replacing the other style bucket with same size recess.

Q. In other words, the ditcher stick "D" with the plate, which has been marked "F" attached thereto, could be removably fastened to any size dipper bucket which had the same size recess on the back plate of the dipper?

Mr. Edgerton: This question is objected to as leading.

A. Yes, sir.

(Narrative continued.) The Northwest Boulevard Company owned another shovel of the Thew type like that shown in Defendants' Exhibits 56 and 57, and it had practically the same style ditcher stick and parts for

fastening the ditcher stick to the bucket. The bucket on this other steam shovel had a rectangular recess on the back casting of the dipper bucket. The other steam shovel had a foot member or casting like that marked "F" on Defendants' Exhibit 56 and had the same manner of attaching the casting "F" to the dipper bucket. The buckets on these two shovels were different sizes. The other shovel which I have just been testifying about was purchased after the shovel shown in Defendants' Exhibits 56 and 57. The shovel shown in Exhibit 57 had a three-quarter cubic yard bucket and the other shovel had a five-eighths cubic yard bucket.

Q. Yet the buckets on the shovels, though of different sizes, could have been interchanged on either shovel by means of the pin and the bolts "B" being inserted through the foot casting "F" and rectangular recess in the back dipper casting, in the manner which you have previously described. Is that correct?

Mr. Edgerton: The question is objected to as leading and as calling for an opinion.

A. I could not say positive, never had occasion to change. If the recess is the same they could have been changed.

Q. I now hand you a tracing, which was made from the machine shown in Defendants' Exhibits 56 and 57, and ask you to state whether or not this tracing shows the correct assembly of parts by which the ditcher stick D is attached to the dipper? Referring in particular to "Fig. 1" and "Fig. 2". A. Yes, sir.

Q. The other figures on this tracing show the parts in a disassembled relation, is that correct? A. Yes, sir.

Mr. Mahoney: The tracing which has just been identified by the witness as a correct showing of the relation of parts of the dipper and ditcher stick shown in Defendants' Exhibits 56 and 57, is hereby offered in evidence and the notary is requested to mark the same "Defendants' Exhibit 59, tracing of dipper bucket and ditcher stick shown in Defendants' Exhibits 56 and 57."

Mr. Edgerton: The exhibit 59 is objected to as incompetent, and immaterial. No explanation has been given by the defendants as to their failure to produce the working drawings from the machine manufacturer, nor has the exhibit been shown to have been made from the machine itself.

Q. I now hand you what purports to be a circular No. 26, issued by the Thew Automatic Shovel Company, of Lorain, Ohio, and ask you to state whether or not this circular 26 shows any shovels with dipper arms and buckets like that shown in Defendants' Exhibits 56 and 57? A. Yes, sir.

Q. Will you indicate on this circular by means of the letter "G" one such showing? A. Witness marks the circular with letter "G".

Q. Please read the legend on this circular 26, which has been marked by the letter "H".

Mr. Edgerton: The circular speaks for itself. There is no occasion for the witness to read from the circular.

A. "The dipper is interchangeable at the point indicated."

Q. Where does the lead line from this legend you have just read lead to on the illustration on this circular.

Mr. Edgerton: Same objection.

A. It leads to the dipper stick of the shovel marked "G" and bucket.

Mr. Mahoney: The Thew Automatic Shovel Company of Lorain, Ohio, circular No. 26, is hereby offered in evidence and the notary is requested to mark the same "Defendants' Exhibit 60, Thew Automatic Shovel Company's Circular No. 26."

Mr. Edgerton: The Exhibit is objected to as immaterial, incompetent and insufficiently proven.

Q. When did you do your last work as operator on the machine shown in Defendants' Exhibits 56 and 57 for the Northwest Boulevard Company? A. Approximately in 1925.

Q. How is the hinge plate shown in Fig. 3 fastened to the ditcher stick, referring to Defendants' Exhibit 59? A. It is pinned to the arm as shown in Figure 2 and Figure 1.

Cross Examination by Mr. Edgerton.

I first entered the employ of the Northwest Boulevard Company in 1916, about October. My first service with them was as fireman on the machine illustrated in Defendants' Exhibit 57. I served in that capacity about three years. I served as operator of the machine about five or six years. I could not say exactly when the Northwest Boulevard Company purchased the second Thew excavator, possibly two years later than that one. I

am not sure but I think the model number of the second machine is 1192, it was an older shovel, a re-built shovel. I would say that 1192 was the shop number. The second machine was older in sequence and manufacture at the factory than the machine shown in Defendants' Exhibit 57. I operated the second machine. As to the difference between it and Defendants' machine No. 57, I would say there was no general difference in design, some parts reenforced and just ordinary changes in the line of improving, in Exhibit 57 over the old one. The second machine to which I have referred is now in the junk yard. As to whether any part of the scoop and stick is intact, I don't know. They have had it three years, I expect. I mean that the junk people had it three years. I have not tried to look it up lately.

Q. Referring to Exhibit 56, I call your attention to the clearance about the "pin", which appears to be occasioned by wear, and ask you to explain, if you can, how this wear occurred. A. As that bucket is on the ground and you are crowding it the weight is down on the "pin", as soon as you release that pressure the weight is on the other side, it is bound to wear on the loose pin.

Cross examination closed.

Deposition closed.

(Certificate of notary omitted.)

Walter Ferris, a witness, recalled by defendants, testified as follows:

Direct Examination.

Q. Please compare some of the patents set up in defendant's answer against the third Downie patent No. 1,709,466, and compare these patents with the structure of this third Downie patent with particular relation to the subject matter of claims 1, 2, 8, 10, 11, 12, 13, 15 and 19.

The Court: This is the third Downie patent, which was not involved in the Cleveland litigation?

Mr. Corbett: Not involved in the Cleveland litigation. That is the assembly patent.

A. Referring to the Downie patent 1,511,114, shown on chart 19—

Mr. Corbett: I think it might be better to talk from that patent.

The Court: Is this the patent you want, Mr. Corbett, the one he has there now?

Q. What are you going to do with that patent. A. That is to show the change, the development of this patent.

Q. You are going to compare that patent with the patent in suit, 1,709,466? A. Yes.

The Court: I see. All right.

Mr. Corbett: You better work from the patent drawings, unless you have a clear disclosure there, so you can show the Court better that way. Speak loud and mention the reference numbers or numerals, or letters.

A. Comparing Fig. 2 of Downie patent 1,511,114 with Fig. 2 of 1,709,466, it appears that the attachment of the dipper, rigid attachment of the scoop to the end of the stick, and the rigidity of that attachment, was obtained by exactly similar members in every respect, except that in the patent 1,709,466 both members are made detachable in order to permit the scoop to be changed.

The Court: Interchange the parts of the scoop?

Witness: Yes. All the stresses taken during the digging operation on these back braces and on the stick are duplicates of the stresses in this patent, and the design has been changed in order to permit disassembling.

Q. In other words, bolts are used instead of rivets; is that the idea? A. Pardon me.

Q. Bolts are used instead of rivets? A. Yes. Well, there are additional separations made, and those separations are closed by bolts which can be unscrewed and taken apart. Now, I will illustrate that more in detail by chart 101, which shows the Osgood dipper, Osgood scoop and its attachment to the handle.

Mr. Corbett: You cannot compare one reference—this is a question of validity, Mr. Ferris. Can you compare one patent with another?

Witness: Well, I can use that to illustrate the differences more easily. Well, the thing that I want to say is, that the separation of this ditcher stick from the arched or bail structure that goes to the top of the scoop is merely made with the well-known method of connecting the ditcher stick with clip angles and bolting the clip angles to the arched structure of the scoop by fastenings

of a well-known nature, and the braces 20 are also separated and put into two pieces and similarly connected.

Q. Now, take the rest of the patents. Take them up briefly and discuss them. Take the King patent for instance, and discuss the structure or connection there, comparing it with the connection structure of the Downie patent No. 1,709,466, with particular reference to the question of tension bolts. A. King, No. 589,565, patented September 7, 1897. In this case the ditcher stick 9 is terminated by an enlargement made by plates W and W, rigidly secured to the end of the ditcher stick structure, and each of those plates terminates in a foot which engage respectively the upper and lower bands or arches around the upper and lower sides, or top and bottom, of the dipper as it appears on this chart, being attached thereto entirely by bolts which are parallel to the axis of the dipper stick. In addition, the feet of these plates are curved and fitted into cross sockets, and the connecting bolts which hold the dipper,—dipper stick to the dipper,—pass through clearance holes so that the bolts do not touch either side of the hole, and maintained in this position—clearance holes, I mean, of the dipper stick—maintained in that position by the curvature, so that it cannot touch either side of the hole, and is entirely in tension.

Q. Now, take the next patent. A. With reference to the dipper stick construction, there are four patents in evidence,—Howard, Coffey, Boehm and Robinson,—of which I have no copies.

Q. What is the number of your Howard patent? A. 674,417. Howard, 674,417, shows a ditcher stick composed of spaced parallel channels with filling members in between to space them apart.

Q. Which Figure is that, Mr. Ferris? A. That is in Fig. 4. Boehm, No. 999,953, also shows a ditcher stick made of spaced parallel channels, referring to Figure 4, also to Figure 5.

Mr. Richey: Are you citing this against the third Downie patent?

The Court: This is the assembly patent.

Mr. Corbett: Yes.

A. (Continuing.) 745,329, B. H. Coffey, Figs. 3 and 4, show a ditcher stick made up of spaced parallel channels.

Q. While you are on that patent, Figs. 3 and 4 show these spaced parallel channels facing each other; is that correct? A. That is correct.

Q. And in that case, they are separated by plates? A. By wooden filler.

Q. By wooden filler, and there also have connected thereto, to make the rectangular—to make the stick, the rectangular cross section to the plates? A. Yes, sir. That makes a complete box section, commonly called armored; a completely armored wooden dipper stick.

Robinson, 1,047,991. Referring to Fig. 6, particularly, this shows a ditcher stick made up of two parallel channels 18, with inward turning flanges and filled in with alternating thick wooden members and thin steel members, making what is called a laminated dipper handle, which is the subject of this patent.

Those four patents are illustrative of the general effect, that it has been the universal practice to make the dipper stick of channels or beams or pieces of wood or plates in pretty nearly all possible combinations, the object being to get a structure which would offer the greatest possible resistance to bending and particularly to torsion and not break. Any way to do it is the best way.

Q. Have you finished your patents now, Mr. Ferris? A. I have. Those are the only patents which I have on the list.

Q. Suppose you briefly consider the structure of the Thew Shovel Company, which is in evidence here by way of depositions.

Mr. Mahoney: There are three depositions, Yardley, Thompson and Lawrence, which I introduced here lately. Here are the photographs. I just introduced those exhibits showing the shovel, and there is the structure.

A. The blue-print of that ditcher—Is there a blueprint of that Downie in evidence?

The Court: You want the pictures?

Witness: If I might have a picture of the Thew, to make sure of it.

This casting,—this steel casting generally square in section, represents the top of the dipper in the sense in which we are generally locating dippers in this discussion, and shows several interesting features. The first is the detachability. I think this perhaps is plainer (referring to chart). This casting has deep ribs or girders

running across the plate where it is fit, to make it stiff or strong, against the upward or downward pushing of the dipper stick. The dipper stick is provided with a rectangular end plate which fits down into a pocket in the design, which is partly connected by tension bolts and partly by a long shear pin. This illustrates the interchangeable connection, because different widths of dipper scoops can be put on the same handle, and it particularly illustrates the tension bolts or requirement with girders across the back, to stiffen up the back and take the thrust off the stick, and the shear and tension connections.

Q. Would you say that there is any difficulty in the structure of the type described in this third Downie patent in providing bolts that are in tension when those bolts are used like the bolts 28 on Fig. 6 of this third Downie patent? A. I would say it is difficult to provide bolts that are used in tension exclusively.

Q. Would you say there is any difficulty in the way —to provide that exclusively, you say? Just what would happen, and what would be the stresses that would exist, briefly, in a shovel of this kind against bolts such as the bolts 28? A. The bolts would be bound to take shear. It is pretty nearly impossible to put those bolts through there and keep them in tension exclusively. The dipper stick takes severe torsional strain, due to obstructions alternately on the two sides of the trench, wherever there is both encountered in resistance, and this torsional stress having to be resisted by some stress which is equivalent to shearing those bolts.

Q. Will you refer again to the Osgood Dredge Company dipper stick which is shown in Defendant's Exhibits 68 and 69, and consider the bolts which extend through the clip angles at the base of the dipper stick,—extend to the base of the clip angles into the shovel—and state whether or not the screwing of those bolts in place would exert a tension stress on the bolts? A. Oh, certainly. When they are screwed tight they have a heavy tension in them.

The Court: The tighter they would be, the more tension would there be?

Witness: Yes, sir.

The Court: And if they got loose, they would be liable to take some shear; is that correct?

Witness: Yes, they would take some shear.

Q. The fact is that they would probably be subject to both shear and tension?

The Court: Well, as I understand his testimony, that is theoretical only, that they are always in tension. It depends on what the shovel encounters in its everyday work. Is that what he means by his testimony? He said, encounter obstacles on one side or the other.

Mr. Corbett: He means the greater twisting stresses that would render these bolts subject to shearing stresses.

The Court: Yes.

Witness: If those bolts were the sole connection between the dipper handle and the shovel, they would be subject to shear, also. There would be no way of escaping it.

Q. Do you have in mind any other prior art structures, besides those you have discussed, which throw light on the question of novelty in this third Downie patent? A. Well, the thing that I had next in mind was a little further discussion of the similarity of those members with ordinary building practices.

Mr. Corbett: I think that has been made clear to you, Your Honor.

The Court: No, he has not covered that.

Mr. Corbett: Well, suppose you explain that.

The Court: Outside of this digging and excavating machine industry.

Witness: Well, that is outside of that, which is the general practice of making such structures. This ditcher stick, of either of these constructions, in its construction and in its requirement for strength at the bottom where it has to take a heavy thrust to bridge the gap between this side of the dipper and that side of the dipper is almost the duplicate of the ordinary columns in a building. It is designed for largely the same reasons, and to produce almost a similar structure in point of effect.

Q. I hand you herewith a group of photographs, which I will designate Defendant's Exhibits 76, 77, 78 and 79 and ask you to state, if you know, what those photographs show? A. These photographs show a Morrison dipper of ¾ yard capacity attached to a revolving shovel, at the Evansville plant of the Bucyrus Company, 14 B shovel.

Q. State what you know about this shovel structure shown in these photographs from your actual knowledge. A. From my actual knowledge, I merely

know that the drawings were made under my supervision, the bucket built, and from these photographs and general reports, the reports which would have to come back to me and did come back to me, I know it was tested at Evansville. I didn't see the test. I know it was found to function satisfactorily.

Mr. Richey: I object to that.

Q. Was it the practice when you were chief engineer of the Bucyrus Company, which I understand you were at this time— A. Yes, sir.

Q. Was it the practice for you then to discuss the results of these tests and receive reports in connection with them? A. Undoubtedly; absolutely.

Mr. Richey: Are the reports still in existence?

Q. Were the reports always written, or were they oral? A. They were usually a written report. I don't know whether it is in existence or not.

Q. Did you also discuss it orally? A. Undoubtedly, yes. It was the usual practice.

Q. Was the report on this test favorable or unfavorable?

Mr. Richey: I object to that. He said they were written reports, and he don't know whether they are in evidence or not.

The Court: You haven't laid the foundation for secondary evidence, have you?

Mr. Corbett: Well, Your Honor, he was in a position where he was in the business of designing these shovels, and therefore certainly was in a position to know that a report would be made to him if it didn't work.

Mr. Richey: Anyhow, if it was satisfactory, it might have been merely a matter of the opinion of some one.

Mr. Corbett: When the chief engineer of this Bucyrus Company designing the shovel doesn't get any backfire from it, it is pretty good evidence that it is successful.

The Court: Well, I don't think that is competent evidence. It doesn't give Mr. Richey any chance to cross-examine him on this subject at all. He has got somebody's opinion. If it is all right, it is 100% all right.

Mr. Corbett: Your Honor, this is a matter that came to us just before we came down here on this trial.

The Court: Well, if you want to support it later by depositions, all right.

Mr. Richey: Now about that, Your Honor, I wonder if we have the right to take depositions after trial. Doesn't the statute say that the depositions must be taken between issue and the trial?

Mr. Corbett: On new matter the Court can certainly reopen the case.

The Court: I would think so, although I have never had that phase of it presented to me.

Mr. Richey: If it was a matter of delay, and the Court thought so, I don't think they could.

The Court: This has all developed on the presentation of the case, as I understand it. It is something new.

Mr. Corbett: When the time comes, we will show the excuse. I don't think we need to press this motion at the present time.

Mr. Richey: Well, all right.

The Court: At some time you will want to meet all this, Mr. Richey.

Mr. Richey: Well, I will meet it if I can meet it. If he wants to ask Mr. Ferris' opinion as to how this thing would operate, I have no objection to that.

The Court: You couldn't have any objection to that.

Mr. Richey: No. But here he says it operated satisfactorily. I assume it did operate satisfactorily, inasmuch as it scooped up the dirt and dumped it. But the report that he speaks about is not before us, and we don't know what it shows.

The Court: Is that satisfactory to you, Mr. Corbett, to ask this witness his opinion on whether it would operate satisfactorily?

Mr. Corbett: Well, we will ask his opinion, but we wouldn't want to be shut off about taking depositions.

Q. You might state, Mr. Ferris, whether this device shown in these photographs will operate satisfactorily? A. It will, and did.

The Court: Well, strike out the latter part of it.

Witness: All right.

Q. I hand you the patent to Olson, No. 826,051 of July 17, 1906, and ask you to briefly explain the structure of that machine with respect to its manner of operation, whether it dug towards the machine or away from the machine? A. This patent shows a machine in which a scoop was mounted—

Mr. Corbett: Your Honor, that was in the Cleveland suit.

The Court: This one was?

Mr. Corbett: Yes, sir.

The Court: Of course, it wasn't with reference to this patent here, was it?

Mr. Corbett: This has a bearing on the drop bottom. We are just trying to clean up these questions. It has a bearing on the drop bottom. I will state the bearing as soon as the witness has explained.

A. (Continuing.) This patent shows a machine with a scoop 25 mounted,—rigidly mounted on the lower end of the ditcher stick 24.

Q. Just show the Court, will you, please? A. I beg your pardon. (Presents to Court.)—but operated by two lines, one of which 28 pulls the scoop towards the machine, and the other of which marked 30 pulls the scoop away from the machine. By referring to Fig. 2 of the patent, it will be seen that the scoop can be reversed, so that by using the line 30 as a hauling or digging line, the machine operates as an out-stroke or outward arc shovel, while from Fig. 1 it is seen that by using the line 28 as a hauling or digging line it acts as an inward arc or back hoe stroke.

Q. Do you find anything in the specifications that bears on that question? If so, please read it. A. Which bears on the reversal of the dipper?

Q. Yes. That is, on the question of whether it could be used both ways, digging towards the machine or digging away from the machine? A. (Reads.) "If desired, said derrick may be mounted"—this is at page 2, line 77, —"If desired, said derrick may be mounted upon a scow or other suitable support, (not shown, but the construction of which would occur to one skilled in the art), and if desired said shovel 25 may, as shown in Fig. 2, be turned around so as to fill while moving away from the derrick support, in which latter case the closed end of the scoop or shovel will be provided with an outwardly opening latched door 25-a, having a latch releasing cord or wire 32 secured to latch 33 thereof and carried over any suitable purchase point or guide wheel 34 and thence to said car or other support, so that said door may be released and the load of earth dropped through the doorway to the dump."

Mr. Corbett: So as to clarify that point in your mind, this patent is offered to show, and is called to Your Honor's attention to show, that prior to the entrance, and long prior to the entrance, of Clutter in the

field, it had been realized that an outstroke shovel, an outstroke scoop and stick of that type, could be reversed on the same machine and used as an instroke shovel. Now, that has a bearing in connection with the devices of the type of the Morrison patent, because we are going to make the contention that there is no invention—in view of the fact that it had been previously suggested to use an outstroke shovel, reversing it and getting an instroke shovel,—that there was no invention in taking an outstroke shovel of the Morrison patent and reversing it, and in that connection the testimony which this witness is about to give relative to the Morrison patent bears upon, or produces a different light,—throws a different light on the Morrison patent than that which was thrown on the patent in the Cleveland suit. I think I make myself clear on that.

The Court: I think I can follow you. Now, the Morrison patent was in the Cleveland suit, however.

Mr. Corbett: Yes, it was, and it was discussed by Mr. Downie, but it was painted in such a light by Mr. Downie as we believe to be an erroneous light, and we are going to attempt to show it.

The Court: Now, this applies to the Clutter patent?

Mr. Corbett: This applies to the drop bottom first Downie patent.

The Court: All right.

Q. I hand you a copy of the patent to Morrison, No. 1,249,805, and ask you whether or not the device of this patent could be reversed and used as an instroke ditcher, or used as the scoop and stick of an instroke ditcher? A. It could.

Q. Would the direction or extent of the trip chain, the position of the hauling bail and the general shape of the bucket prohibit the use of this device on an instroke ditcher machine? A. They would not.

Q. Please explain to the Court the term "lead" which is sometimes used in connection with scoops or buckets? A. Referring to Fig. 1 of the Morrison patent, to make this matter clear, if I drew a line touching the point of that tooth—

Q. Please draw the line, and then we will offer that in evidence. A. That line representing the part of the earth which was not removed, and this being the cut taken by the dipper, the lead is the angle clearance,—it might be called clearance—between the bank after the dipper has passed and the front face or bottom face of the

dipper as it passes the bank,—is what I understand to be the intention of that citation.

Q. Please designate that line that you have just drawn with a letter and a lead line. A. I call that the angle A.

Q. Is the lead of the bucket shown in this Morrison patent a material detriment to the use of that bucket on an instroke ditcher,—that bucket and stick? A. The lead cannot be absolutely determined, but assuming the cut to be at right angles to the dipper stick, the lead, to get the best results should be somewhat reduced by changing the angle of the stick in the manner provided.

Q. If you were to adapt that to an instroke ditcher, what would you do? A. I would just put shorter line c-3 on connecting the top of the right hand upper corner of the scoop with the casting c-4 on top of the ditcher stick, on the front of the ditcher stick.

Q. When you were with the Bucyrus Company, was it known in the art to provide adjustable links of this kind, or to vary the position of these links? A. The members analogous to c-3 were practically always made adjustable.

Q. Have you any prior art patents at hand that show that? A. I will see if I can find one.

The Court: That would be setting that scoop at a certain angle; that is what that would amount to?

Witness: Yes, sir.

The Court: To a fellow that doesn't know much about patent law or machinery,—a question of providing them for any angle that they wanted to set the shovel,—wouldn't it?

Witness: Yes, sir.

Mr. Corbett: In order to shorten this and prevent the witness searching for patents, we will refer to patents in argument, or briefs, in this case that show that adjustability.

The Court: All right.

Q. Considering this Morrison patent still further, would you say that it would be possible with the bucket and the latch construction to close that bucket by momentum? A. Yes, it is. I will qualify that in this way: No, I won't qualify it. I will say even as shown in the patent it will close by momentum.

Q. Would you say that the top surface of the latch piece or latch tongue on the latch attached to this bucket is too flat and the lower surface of the latch is also too

flat to permit this automatic engagement, or automatic closing of the bucket? A. I would say that as the detail is shown on the drawing, it does not call for the normal amount of clearance under the latch which is always provided in every excavating dipper.

Q. Well, is it customary in the making of latches of this type to provide for a proper clearance or not,—or is it customary to adhere rigidly to the Patent Office drawings? A. It is customary to design with the necessary clearances which are necessary in every dipper.

Q. In that patent I call your attention to the hauling bail which is connected to the scoop and ask you whether or not there would be any interference between the teeth of that scoop and that hauling bail in the digging action of the scoop? A. There would not.

Q. That is, if it were applied to an instroke ditcher? A. The hauling bail b-6 is not shown in the attitude which it will assume.

The Court: In operation?

Witness: In operation as an instroke ditcher. It would come out somewhere near parallel to the bank surface, which has been indicated, or which I will indicate by the letter B, and the approximate direction of the hauling bail I might indicate by an arrow C, under ditching conditions, or back hoe conditions.

Q. At the time this patent was taken out, what was the custom with regard to the use of side rake teeth? A. Used them whenever they were required.

The Court: I suppose they always used something to protect those pivot points, didn't they?

Witness: No,—I would say to protect them in a sense. The prime requirements of protecting pivot points is to get the trench wider than the entire scoop, so the scoop won't be jammed in there. I wouldn't say the side rake teeth were always located right on the side of the pivot point.

Q. But they were commonly used? A. Always used to get the ditch wider in a narrow trench; to cut wider than the scoop.

Q. And it is true that a man putting side rake teeth on a scoop of this kind to apply it to instroke ditching work would provide those teeth of such structure that it wouldn't interfere with the hauling bail; isn't that right? A. Absolutely.

Q. Was the Morrison patent device and the device which you designed as shown in the photographs of the

Defendant's Exhibits 76 to 79, inclusive, a machine which had a three-power application in view of the use of the shipper shaft on that machine? A. No.

Mr. Richey: You didn't see it operated on your machine, did you?

Witness: I designed the machine.

Mr. Richey: But you didn't see it operate on the machine?

Witness: No. I know the machine only had two power line.

Mr. Corbett: Your Honor, we submit that a man who designs a machine knows whether it is two-power line or three-power line.

Mr. Richey: Suppose they found it didn't work, when it would with three.

Mr. Corbett: Well, you ask him, Mr. Richey.

Mr. Richey: No. He will tell you what somebody told him. We went over this before, that these fellows told him, and they said it was satisfactory, and so he would claim that they did this, that and the other.

The Court: You never saw this machine in actual operation yourself, did you?

Witness: I never saw this dipper in operation.

Mr. Corbett: I might ask how it was when he designed it.

Q. You saw the dipper on a machine? A. The dipper was used on a standard 225-B coal stripping shovel.

Q. And you have seen those in operation, have you? A. Dozens of them.

Q. And they had a three-power application or two? A. No, two-power.

Mr. Corbett: That is the answer.

Q. You designed the dipper for this shovel? A. Yes, sir.

Mr. Richey: Well, you are just going around in a circle. Suppose he did design it. That doesn't prove or show that he saw it.

Mr. Corbett: We will prove that by depositions. We offer in evidence the copy of the Morris patent, No. 1,249,805, of December 11, 1917, with the marks made by the witness thereon, marked as Defendant's Exhibit 80.

Q. Are you able to find in defendant's structure a scoop having an open top? A. No.

Q. Do you find in defendant's structure any scoop having a bail extending across its top? A. No.

The Court: Your structures are closed structures, and they wouldn't need a bail.

Mr. Corbett: Yes, sir. No, Your Honor, we don't need them.

Q. In defendant's structure, is defendant's ditcher stick,—the Osgood structure—is it made up of two parallel structural steel members which are spaced so that access may be had to space between them? A. No.

Mr. Richey: Now, that is asking the witness questions in the terms of the claims. That is highly improper.

Mr. Corbett: I don't think that is in the words of the claim.

Mr. Richey: Asking leading questions—does he find some terms in the patent or the claim of a different construction. Of course he says no. He is leading him right straight along, and testifying for him. Might as well argue it.

The Court: Well, these experts do usually argue the case, don't they?

Mr. Richey: Well, I don't think counsel should put the testimony in the mouth even of an expert.

Q. Is any provision made for obtaining access to the interior of defendant's ditcher stick structure adjacent to the bottom thereof,—speaking of the Osgood structure now? A. This is of the Osgood structure.

Q. Will you please point out to the Court that provision? A. I know what it is, but I am afraid I haven't a picture of it now. Yes, here it is. Here is the chart. Referring to the chart 101, this ditcher stick, as I have said before, is a closed structure comprising a wide channel on the back, two somewhat smaller channels extending parallel, closed by the cover plate in the front, and there are in the interior here two bolts which fasten it to the back plate of the scoop. In order to get at these bolts to apply them, they cut a couple holes in the webs of these channels to the end of this, to get in to the bolt.

Q. Does the defendant have a structure wherein all the bolts which need to be removed to detach the scoop from the stick are in tension?

Mr. Richey: I object to that as leading.

The Court: You can ask him that by asking him what bolts there are.

Q. Will you describe the structure of the Osgood Company connections between the ditcher stick and the scoop, and point out whether or not any of the bolts which must be removed to disconnect the stick are in shear? If so, indicate which bolts. A. A sectional sketch of chart 101 shows the structure of the ditcher stick and the supporting girders to which it is attached across the top dipper, cut in two. The angle clips, I believe 27 in the patent—I will check that. No, they are all marked here. The angle clips marked 4—

(Last question read, upon request of Mr. Corbett.)

A. There are six bolts marked 3 on chart 101, which extend parallel to the ditcher stick, and secure the ditcher stick to the scoop, and one bolt marked 6 which passes through the ditcher stick transversely and also through the vertical girder plates 1, and that bolt 6 is in shear. The other bolts 3 may have a combination of either shear or tension,—shear and tension.

Q. Regarding that cross bolt, which you have designated— A. 6.

Q. —6, that passes directly through the angle members 1, and also through the plates 7, which are laid upon the members 7-a, which complete the formation of the—

The Court: Well, you can see this here (referring to chart 101).

Witness: I will change that to 7-a.

Q. —ditcher stick, with the exception of the additional channel plate 7-b. That is correct, isn't it? A. Yes.

Q. In other words, these parts 7, 7-a and 7-b form a rigid box-like stick; is that correct? A. Yes.

Q. And the bolt 6 passes directly through and secures that stick, partially anyhow, to the angle members 1; is that right? A. It is, yes.

Q. Now, will you refer to Downie patent No. 1,709,466, and point out to the Court any difference, if it exists, between that bolt 6 and the bolt 33, in its operation? A. The bolt 33 of the Downie patent does not engage any part of the structure of the ditcher stick, but passes clear through between the parallel channels 12 without engaging them.

The Court: What Fig. did you have there,—which sheet?

Witness: 1709.

Q. This figure 6, isn't it? A. I was looking at Fig. 6, and Fig. 3 shows the bolt 33, and Fig. 6 shows where it passes through.

Mr. Corbett: Your Honor, I think that I have about finished with this witness. I think Mr. Reed has several questions. May I look over, and if there is anything else, while he is examining,—will that be satisfactory?

The Court: Yes. Go ahead, Mr. Reed.

By Mr. Reed.

Q. Mr. Ferris, you are familiar, are you not, with the ditcher stick and the scoop construction of the General Excavator Company? A. Yes, sir.

Q. You have seen the ditcher stick and scoop, have you? A. Yes.

Q. Have you any drawings or other illustrations showing that construction? A. I have chart 102, showing the ditcher stick and scoop construction of the General Excavator machine.

Q. Will you compare the ditcher stick construction as shown in that chart with the ditcher stick construction of the first Downie patent, 1,511,114? A. The stick construction of the General machine as shown in this chart comprises two channels extending parallel and bolted together through a wooden separator or filler between the channels with flanges turned in around the filler.

Q. How long is that wooden filler as compared with the stick? A. Full length of the stick.

Q. And it completely fills the space between the channels? A. Yes, sir.

Q. I ask you to compare that with the ditcher stick structure shown in the first Downie patent. A. The ditcher stick has two channels separated and secured by some batten plates extending over the width of the separated channels, but having no filler in between.

Q. At the time of the application for this first Downie patent in 1921, was it novel to provide a ditcher stick comprised of inwardly facing channels? A. It was not.

Q. I believe you have in your testimony referred to certain prior patents showing inwardly facing channels. Will you call attention to and explain such of those as are pertinent to the General Excavator ditcher stick? A. The Howard patent, 674,417; Coffey, 745,329.

Q. As you enumerate those, please point out the pertinent features of them and make a brief comparison

of this stick and the General Excavator. A. Referring to the Howard patent, 674,417, Fig. 4.

The Court: The same figure you referred to before?

Witness: Yes, the same figure. We have here the two channel irons. I cannot be sure of the designation there; it may be 8; probably 8; but at any rate there are two channel irons on the outside of the stick, with wooden filler in between the channel irons, and the channel irons bolted through with the bolts 7.

Referring to Coffey, 745,329, I find in Fig. 3 the two parallel channel irons, marked G, with a wooden filler; but differing, in that the through bolts are not shown passing through them.

In Robinson, 1,047,991, Fig. 6 shows the two parallel channels 13 with a filler between them composed partly of three sticks of timber, and partly of two steel plates, the whole structure being held together by countersunk rivets passing through it.

The reference to Boehm, 999,953, is not pertinent in that connection, as the wooden filler is not shown.

Q. At the time of the application for this first Downie patent, was it novel to provide a ditcher stick with the space-bearing bracket arranged to form a long boring for a pivot pin? A. It was not.

Q. Can you call attention to any patents showing such an arrangement? If so, please compare them with the bearing bracket of the General Excavator ditcher stick? A. Referring to patent 1,352,257 as to S. Ford, in which the bearing brackets 17 are shown secured to the inner flanges of the two parallel channels 18, which channels 18 form the ditcher stick. These bearing brackets 17 embrace and are pivoted on a pivot pin 33, which extends across between the two bearings 21.

A similar construction is shown in the catalogue of the American Ditcher Company, in which the dipper or ditcher stick is composed of two not quite parallel channels spaced apart by the usual structure of latticing, the scoop being rigidly secured to the lower ends of those channels, and the channels being provided at their upper ends with brackets, attached to the webs, I believe; not to the flanges; and anchor upon a long pivot pin extending across the entire width of the boom.

Mr. Reed: We should like to identify that catalogue by an exhibit number.

The Court: It has been identified.

Mr. Reed: I want to connect it with the answer.

The Court: All right.

Q. The catalogue to which you just referred has been identified as Exhibit 75, I believe, page 37; is that correct, Mr. Ferris? A. That is correct.

Q. Does the General Excavator structure have spaced irons or arms at the outer end of the boom, as shown at 5 in the Downie patent 1,511,114? A. It does not.

Q. Is the General Excavator ditcher stick secured to the scoop at a point in the rear of the open end of the scoop? A. It is not.

Q. Where is it secured? A. Secured even with the open end of the scoop, flush with it.

The Court: Referring to Exhibit 102?

A. Exhibit 102, yes.

Q. What is the arrangement of the rake teeth on the General Excavator, the side rake teeth? A. There are two chisel-shaped side rake teeth, beveled on the inside, and having the pivot pin of the bucket passing through the teeth.

Q. A moment ago you referred to Exhibit 102; you had reference to Chart 102, did you not? A. Yes, Chart 102.

The Court; Mr. Richey, have you settled your differences about the fourth Downie patent, or is that still in the case?

Mr. Richey: We have not been able to settle it, Your Honor. I thought Mr. Reed said his client did not intend to make any more of them. I wrote up an agreement to that effect. He said he would not agree to it.

Mr. Reed: He wrote up an agreement which amounted to an injunction. If we are going to be enjoined, we will take it in the regular course.

Mr. Richey: No, we did not. The agreement was in case of any future litigation between the two parties over the same patent, we could use the same depositions, and things of that. It was not an injunction. All we asked you to do was say how many you made; that you did not intend to make any more; that is what it amounted to. I thought that was what he said he would do. I now understand he will not.

Mr. Reed: We do not think we infringe. We are sued and are willing to stay in the record. We have made none of those teeth since the summer of 1929. Since

the date of the issuance of this fourth Downie patent, we sold only thirty-one of them. The last we sold in February, 1930.

Mr. Richey: Does the defendant, General Excavator Company, intend to make or sell or use any more of our teeth, which we charge infringe?

Mr. Reed: Not to my knowledge.

The Court: Of course I am only interested in the question whether or not it is still in the litigation.

Mr. Reed: My information is that they have no present intention of returning to that tooth.

The Court: That would not be satisfactory to you, Mr. Richey?

Mr. Richey: Well, no, that is not satisfactory. Cannot you say that your client does not intend to make, sell or use any more of them, or to encourage any one else to do that?

Mr. Williams: What you are asking is tantamount to an injunction.

Mr. Richey: If I want an injunction I will ask the court for an injunction, do you not see? There is a big difference between asking for an injunction and in asking him what are his intentions.

Mr. Williams: We do not want to find ourselves in the position of the meat packers by a consent decree. They are the only fellows in the world who cannot do those things.

Mr. Richey: Of course they had an injunction against them.

Mr. Williams: Sure.

Mr. Richey: I am sorry we cannot settle it. It looks to me like their position that I am asking for an injunction is all wrong; that is the way I feel about it. I don't think they are justified in taking that position.

Mr. Reed: That would be the effect as I see it of the statement you want us to make.

The Court: Let us proceed, then. All I am interested in is whether it is in or out.

Q. Referring now more particularly to the third Downie patent, 1,709,466, which has been referred to as the assembly patent, will you please state whether or not the General Excavator construction, with relation to the upper or top of the scoop, is it open or closed? A. Closed.

The Court: Practically the same as the Osgood?

A. Yes, sir.

Q. You stated a while ago that the defendant's scoop did not have an open top and did not have a bail; did you intend that to apply to both defendants, General Excavator and Osgood? A. I will repeat it for the General Excavator.

Q. I believe you stated that the wooden filler in the ditcher stick extended the full length of the stick? A. Yes, sir.

Q. Therefore there is no provision for access to the interior of the stick at the bottom? A. There is none.

Q. At what point, with relation to the height or to the top of the scoop, is the ditcher stick connected to the General Excavator scoop, close to it or well above it? A. Connected immediately on top of the scoop.

Q. How many bolts would it be necessary to remove to detach the scoop from the ditcher stick? A. Six from the ditcher stick, not including the back brace.

Q. Could you remove the scoop from the stick without disconnecting the back brace? A. In addition to those six at the end of the ditcher stick, it is necessary to remove ten from the foot of the back brace.

Q. How many of these bolts are in tension and how many in shear? A. Of the six bolts connecting the foot of the ditcher stick to the top of the scoop, four are primarily in tension and two primarily in shear. As explained, all of these bolts, when pulled up by nuts and wrenches, have tension in them. Of the ten bolts which must be removed to disconnect the foot of the back brace from the scoop, five are in tension, and five in shear, primarily; primarily in tension and primarily in shear.

Mr. Reed: I wish to offer at this time this Chart 102 as Defendant's Exhibit 81.

The Court: Any objection, Mr. Richey?

Mr. Richey: If Your Honor please, it is not a true representation of the General construction.

The Court: I think it was used for illustrative purposes only, was it not, Mr. Reed?

Mr. Reed: That is all, sir.

The Court: It may be admitted.

Mr. Richey: What is the exhibit number?

Clerk: 81.

Mr. Reed: If Your Honor please, it will be necessary to offer at this time certain depositions that were taken in connection with this tooth patent: Bolgiano, Rice and Fay.

The Court: Are you ready to read your depositions?

Mr. Reed: Yes.

DEPOSITIONS FOR THE DEFENDANTS

Taken at Cleveland, Ohio.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that defendant herein will take the testimony of the following witnesses:

William C. Bolgiano, 1675 E. 82nd St., Cleveland, Ohio.

J. M. Rice, 14775 Elderwood Ave., East Cleveland, Ohio.

George Fay, 25642 Lake Road, W. Bay Village, Ohio,

all of whom reside more than one hundred (100) miles from the place of trial herein for the use on behalf of the defendant at the final hearing of this cause, before Mercedes E. Hoffman, a Notary Public of Cuyahoga County, Ohio, who is not of counsel nor interested in this cause, at Room 1728 Standard Trust Bank Building, Cleveland, Ohio, beginning on the 19th day of November, 1930, at 10:00 o'clock A. M., and thereafter from day to day as the taking of the depositions may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated November 15, 1930.

Service of a copy of the foregoing notice is hereby acknowledged this 17th day of November, 1930.

RICHEY & WATTS.

PRINTER'S NOTE:

A like notice was issued on behalf of the General Excavator Company and was signed by Mr. Edward L. Reed.

The following depositions were taken on behalf of both defendants, pursuant to the above notice at Room 1728, Standard Trust Bank Building, Cleveland, Ohio, beginning at 10:00 A. M., November 19, 1930, before Mercedes E. Hoffman, Notary Public for Cuyahoga County, Ohio. Counsel for all parties being present.

WILLIAM C. BOLGIANO, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is William C. Bolgiano. I reside at Cleveland, Ohio. I am sixty years of age. I am a mechanical engineer. At the present time I am employed by the Industrial Brownhoist, formerly called the Brownhoisting Machinery Company. This company is located in Cleveland, Ohio. I am testifying under subpoenas in these cases. I am employed as a mechanical engineer by the Industrial Brownhoist Company, and have charge of the bucket department, also small cranes, steam hammers, man trolleys and such devices. I am foreman of that division. The Industrial Brownhoist Company has manufactured a shoveling attachment for its cranes. At that time the company was called The Brown Hoisting Machinery Company. I have been employed by The Industrial Brownhoist and its predecessor The Brown Hoisting Machinery Company for thirty years. The Brown Hoisting Machinery Company booklet No. 10 shows on page 4 the cranes with the shoveling attachment thereon. The picture to which I refer is the upper picture on the right hand corner of page 4. This booklet No. 10 bears a copyright date of the year 1924.

Mr. Mahoney: The front cover, the inside page of the front cover and page No. 4 of The Brown Hoisting Machinery Company booklet No. 10 are hereby offered in evidence as Defendants' Exhibit No. 42, and the Notary is requested to mark the same "Defendants' Exhibit 42, front cover, inside page of front cover and page 4 of Brown Hoisting Machinery Company booklet No. 10, copyrighted 1924."

Mr. Edgerton: The Exhibit No. 42 is objected to as immaterial, irrelevant and insufficiently proven.

(Narrative continued.) The blueprint No. 144,566 is a blueprint of The Brown Hoist Machinery Company

showing our one yard shovel bucket, and is dated 4-13-22, that is, April 13, 1922. This bucket shown in blueprint 144,566 was designed by me. This bucket has side rake teeth thereon. I indicate by the letter A the location of the side rake teeth on each of the showings of the bucket.

Drawing 144,566 shows the bucket for the shovel attachment that was used on Brown Hoisting Machinery Company No. 2 crane illustrated on page 4 of booklet No. 10. The order number shown on this drawing No. 144,566 for which this shovel attachment was made is No. D-4804.

Mr. Mahoney: Brown Hoisting Machinery Company blueprint 144,566 dated April 13th, 1922, is hereby offered in evidence and the Notary is requested to mark the same "Defendants' Exhibit 43, The Brown Hoisting Machinery Company blueprint 144,566, dated 4-13-33, general drawing of one yard shovel bucket."

Mr. Edgerton: The exhibit is objected to as secondary evidence as being insufficiently proven and as immaterial and irrelevant.

(Narrative continued.) Blueprint 144,515 is a print of The Brown Hoist Machinery Company, showing the teeth for one yard shovel bucket. The main title on this drawing of the ownership has been changed to the name of the Industrial Brownhoist Corporation which now are the owners of Brownhoist Company. The blueprint originally read The Brown Hoisting Machinery Company. I have indicated on this drawing 144,515 the location of the side rake teeth with the letter A. The design on this drawing is my own and the drawing was made under my supervision. The date on this drawing is April 4, 1922. The meaning of the notation on the drawing which you have marked with the letter B may be explained as follows. The first line R-H means right-hand tooth manganese steel casting pattern No. $\frac{29332}{1}$ which indicates the pattern number. The order number on this drawing is D-4804. The name of the purchaser of order No. D-4804 is S. G. Cool. He is located at Manitowoc, Wisconsin.

Mr. Mahoney: The Industrial Brownhoist Corporation blueprint 144,515 just identified by the witness is offered in evidence and the Notary is requested to mark the same "Defendants' Exhibit No. 44, Industrial Brownhoist Corporation blueprint

144,515, dated April 4, 1922, teeth for one yard shovel bucket."

Mr. Edgerton: The exhibit is objected to as secondary evidence, as insufficiently proven and as immaterial and irrelevant.

(Narrative continued.) The wooden pattern just handed me is a pattern of the tooth shown on sheet 144,515 designated by pattern No. $\frac{29332}{1}$. From all indications, this is the original pattern made up by The Brown Hoist Machinery Corporation. The No. 29332 on this pattern corresponds to that shown on drawing 144,515 as the right-hand tooth. The casting would be made from this pattern. The company that manufactured these particular side rake teeth shown on drawing 144,515, Defendants' Exhibit No. 44, would probably be the American Manganese Steel Casting Company, because at that time we were doing business with that company. The pattern No. 29332 was manufactured by the Brown Hoisting Machinery Company, and from our office records these teeth were ordered from the American Manganese Steel Casting Company. It was our practice after the teeth had been manufactured by the American Manganese Steel Casting Company that our company would assemble them on the bucket.

Mr. Mahoney: The pattern No. $\frac{29332}{1}$ just identified by the witness as the Brown Hoisting Machinery Company pattern for side rake teeth shown on Defendants' Exhibit No. 44 is hereby offered in evidence and the Notary is requested to mark the same "Defendants' Exhibit No. 45, Brown Hoisting Machinery Corporation pattern No. 29332-1 for right-hand side rake tooth shown on Defendants' Exhibit 44."

Mr. Edgerton: The exhibit is objected to as insufficiently proven and as immaterial and irrelevant.

(Narrative continued.) The blueprint which was just handed me is The Brown Hoisting Machinery Company sheet No. 150,495 dated 5-19-24, title "General drawing of half yard shovel bucket." This drawing shows side rake teeth on the shovel bucket. I have indicated the location of the side rake teeth on drawing No. 150,495 with the letter C in each of the showings. Shovel

bucket shown in drawing 150,495 is my design and the drawing was made under my supervision. Drawing 150,499 dated 6-12-24 is a print of the Brown Hoist Machinery Company. The title is "side teeth for half yard shovel bucket." The tooth shown on drawing 150,499 is the detail of the tooth shown on general drawing 150,495. The meaning of the notation which has been indicated by the letter D on drawing No. 150,499 is as follows: The top line is marked R-h means right-hand tooth, manganese steel casting pattern No. $\frac{30835}{1}$ as shown. Beneath this sentence the letter L-h means left-hand tooth manganese steel casting, pattern No. $\frac{30836}{1}$.

The print which has just been handed me is the Brown Hoist Machinery Company sheet No. 150,497 dated May 17th, 1924, title "door for half yard shovel bucket." The relationship between prints 150,497 and Nos. 150,499 and 150,495 is that the door shown in 150,497 is the one on which the teeth in the other drawings were bolted or riveted. This drawing shows the same tooth as shown in drawings 150,499 and 150,495. I have indicated by the letter E the side rake teeth shown on drawing 150,497. The drawing 150,497 dated May 17th, 1924 shows that it was made under a development order 200,370.

Mr. Mahoney: The blueprints which have just been identified by the witness are hereby offered in evidence and the Notary is requested to mark the same as follows: "Defendants' Exhibit 46, Brown Hoist Machinery Company blueprint 150,495 dated May 19, 1924, entitled general drawing of one half yard shovel bucket," "Defendants' Exhibit 47, Brown Hoisting Machinery Company blueprint 150,499, dated June 12, 1924, entitled, side teeth for one half yard shovel bucket," "Defendants' Exhibit 48, Brown Hoisting Machinery Company blueprint 150,497 dated May 17, 1924, entitled door for one half yard shovel bucket."

Mr. Edgerton: The Exhibits 46, 47 and 48 are each objected to as secondary evidence, as insufficiently proven and as immaterial and irrelevant.

(Narrative continued.) The Freedlund Construction & Supply Company of Miami, Florida was the purchaser

of Order No. 200,370, shown on drawing 150,497 and it was for this company that this device was made. The wooden pattern just handed me is No. $\frac{30835}{1}$ of the tooth shown on drawing 150,499. To the best of my belief this was the original pattern made from drawing 150,499. According to our records in the engineering department the casting from pattern No. 30835 was made by the American Manganese Steel Casting Company.

Mr. Mahoney: The original pattern No. $\frac{30835}{1}$ just identified by the witness as being the pattern from which the castings for side rake teeth shown on Defendants' Exhibits 46, 47 and 48 were made is hereby offered in evidence and the Notary is requested to mark the same "Defendants' Exhibit No. 49, the Brown Hoisting Machinery Company pattern No. $\frac{30835}{1}$."

Mr. Edgerton: The exhibit is objected to as being insufficiently proven and as immaterial and irrelevant.

It is stipulated that the original patterns of Defendants' Exhibits Nos. 45 and 49 shall be used in the Osgood case and that photographs thereof may be used in the General Excavator case with the same force and effect as the original.

Q. Defendants' Exhibits Nos. 45 and 49 are right-hand teeth, the left-hand teeth for the shovel buckets shown in Defendants' Exhibits 43, 44, 46, 47, 48 would be identical with the teeth shown in Defendants' Exhibits 45 and 49 except that they would be left-hand teeth, is that correct? A. Yes.

Direct examination closed.

Mr. Edgerton: Will counsel for the defendants indicate in their answer the section or reference upon which this testimony is based, that is the testimony offered by the Brown Hoist employees?

Mr. Mahoney: The word "answer" in the question by counsel for plaintiff refers to the pleaded answer of defendants in this case, I presume?

Mr. Edgerton: Yes, that was my interrogatory.

Mr. Mahoney: Defendants' answer pleads that patentee of plaintiff's patents in suit was not the original and first inventor of matters displayed therein and at

the proper time the proper statutory notice will be served on counsel for plaintiff in accordance with patent laws of the United States.

CROSS EXAMINATION by Mr. Edgerton.

I was out of the city yesterday and part of the day before. I arrived in Cleveland this morning. The title block on Defendants' Exhibit 44 was changed to read Industrial Brownhoist Corporation after the merger of the two companies. I do not know the date. I know this that the drawing has been changed within two years, that is, the title block was changed, not the drawing itself. The title block of this drawing was changed while that in the Exhibits 43, 48, 47 and 46 was left unchanged due to a direct error, because it was the instruction of the company that all tracings as taken from the vault for any purpose should have the title block changed to read the Industrial Brownhoist Corporation.

Referring to Defendants' Exhibit 44, the initials C. F. K. adjacent the legend "drawn by" are those of Charles Kast, a draftsman in the employ of the Industrial Brownhoist working under my instruction. He is still with us. The initials L. J. M. adjacent the legend "traced by" are those of L. J. Madden. He is not with us any longer and I do not know where he is. Referring to Defendants' Exhibit 48 the initials thereon, E. A. S. and W. C. B. are for E. A. Smith and William C. Bolgiano. E. A. Smith is not with the company any longer, and I am William C. Bolgiano. I do not know where E. A. Smith is now. The initials B. W. B. on Defendants' Exhibit 47 are for B. W. Bugbee. He is not with the company now, and I do not know where he is.

Q. Referring now to Exhibit 44, I call your attention to a circle inscribed in light lines between the side elevation and plan view of the lower figures in the drawing and ask you to state what this circle represents. A. That's the pin connection for the door for bottom sections of the shovel bucket.

Q. Referring to Exhibit 43, will you please indicate the location of the pin connection you have just referred to in your previous answer upon the bucket or scoop, by the use of the character F. A. (Witness marks blueprints as requested).

Q. Again referring to Exhibit 43, does the hexagonal head of the pin connection rest upon a plate which is mounted upon the side wall of the bucket? A. It does, it bears against this plate.

Q. Will you please indicate in the front elevation of the bucket and also the side elevation the plate you have previously referred to by the character G? A. (Witness marks blueprint as requested).

Q. Do you know of your own knowledge that the bucket or buckets which you have testified as being constructed in accordance with the drawings, Exhibits 43 and 44, were assembled in the relation as shown on these two drawings? A. Through personal inspection in our shop before shipment I know that these buckets are according to these drawings.

(Narrative continued.) The teeth were shipped from our plant as bolted to the door or bottom plate of the scoop. They were not connected to the side walls in any manner. Referring to Exhibits 46, 47 and 48, the outer teeth were secured to the door or bottom, and were not affixed to the side walls of the scoop. Referring to Exhibit 46, I have indicated the location of the hinge pin and marked it with the letter H. The head of this hinge pin abuts a reenforcing plate in this bucket. I have indicated by the letter J the location of the reenforcing plate in the various figures in the exhibit.

RE-DIRECT EXAMINATION by Mr. Mahoney.

Q. What is the custom of The Brown Hoist Machinery Company or the Industrial Brownhoist Company as to the dates appearing on the drawing, does that indicate the date the drawing was started or the date the drawing was completed? A. The date of the completion of the drawing.

Q. And the dates on Defendants' Exhibits 43, 44, 46, 47 and 48 indicate the dates on which the drawings were completed, is that correct? A. That is correct.

Deposition closed.

GEORGE FAY, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is George Fay. I reside at 25642 Lake Road, Bay Village, Ohio. I am 27 years of age. I am testifying under subpoenas in these cases. I am assistant to the acting purchasing agent of the Industrial Brownhoist Corporation, Cleveland, Ohio. I have been employed by the Industrial Brownhoist Corporation five

years. The notation indicated by the letter B on Defendant's Exhibit 44 is a pattern number for the tooth shown on that drawing. The contract number for which the teeth were made on Defendant's Exhibit 44 is contract D-4804.

I have records to show that castings were made for the teeth shown on blueprint Defendants' Exhibit 44, particularly those indicated by pattern Nos. $\frac{29332}{1}$ and $\frac{29333}{1}$. I hereby produce those records. I know that the castings were made for the teeth shown in blueprint Defendants' Exhibit 44 from the records I have just produced, because the contract number corresponds with the number which is on the print and also the pattern number.

The paper to which I have just referred is an invoice No. 14012, dated April 26, 1922 from the American Manganese Steel Company to the Brown Hoisting Machinery Company. This invoice covers one tooth No. $\frac{29332}{1}$, and one tooth No. $\frac{29333}{1}$. These teeth were invoiced by the American Manganese Steel because they were purchased by The Brown Hoisting Machinery Company. The American Manganese Steel Company manufactured the teeth shown on Defendants' Exhibit 44 for the Brown Hoisting Machinery Company.

This invoice indicates that the teeth specified thereon as $\frac{29332}{1}$ and $\frac{29333}{1}$ were actually received in Cleveland by The Brown Hoisting Machinery Company on May 4th, 1922. This is indicated by a stamp which the casting department placed on the triplicate copy giving this date, which is clipped to the original. Referring to the original of this invoice No. 14012, it is indicated thereon that The Brown Hoisting Machinery Company paid for the teeth which are invoiced. This is indicated by the stamp reading "vouchered April 29, 1922, voucher No. 383." The total amount of this invoice was $5.40, which was paid on that date. This invoice No. 14012 was obtained by me from the records of the company that are on file. This is the original invoice taken from the file of the Brown Hoisting Machinery Company. The invoice and the entries thereon were made in the regular course of business contemporaneously with the transactions to which they refer and these records which I have produced are under my custody as an employee of the Industrial

Brownhoist Corporation. The photostatic copy of invoice 14012, dated April 26, 1922, I have compared with the original and it is a true and exact copy thereof.

Mr. Mahoney: The photostatic copies of invoice 14012, dated April 26, 1922, which have just been identified by the witness as a true and correct copy of the original comprising three sheets is hereby offered in evidence as Defendants' Exhibit 50 and the Notary is requested to mark the same "Defendants' Exhibit 50, The Brown Hoisting Machinery Company invoice No. 14012 dated April 26, 1922, to the American Manganese Steel Company for side rake teeth $\frac{29332}{1}$ and $\frac{29333}{1}$."

Q. I now refer you to Brownhoist blueprint 150497 Defendants' Exhibit 48 and Brownhoist blueprint 150499 Defendants' Exhibit 47 and ask you if an order number appears on either of these exhibits? A. Order number appears on print 150497, number being 200370.

Q. I now refer you to blueprint 150499, Defendants' Exhibit 47, is a detail of the teeth shown on blueprint Defendants' Exhibit 48, is that correct? A. Yes.

Q. I now refer you to Brown Hoisting Machinery blueprint 150499 Defendants' Exhibit 47, and ask you to explain, if you can, the meaning of the notation which is indicated by the letter D on this drawing? A. This notation is the pattern numbers of the teeth which are shown on the print.

Q. What are the pattern numbers shown? A. Pattern numbers $\frac{30835}{1}$ and $\frac{30836}{1}$.

Q. Have you any records which show whether the teeth shown on Defendants' Exhibits 47 and 48 were ever manufactured by the Brown Hoisting Machinery Company or manufactured for the Brown Hoisting Machinery Company? A. Yes.

Q. Will you kindly produce this record? A. (Witness produces record).

Q. I now hand you one of the records which you have just produced and ask you to state what it is. A. This is an invoice from the American Manganese Steel Company to the Brown Hoisting Machinery Company covering one tooth, pattern $\frac{30835}{1}$.

Q. What is the number and date of this invoice? A. Invoice No. 32170 dated June 27, 1924.

Q. When does the invoice show the shipment was made to the Brown Hoisting Machinery Company? A. June 27, 1924.

Q. Is there any contract or order number on this invoice? A. Brownhoist contract or order No. 200370 appears on this invoice.

Q. That corresponds to the order number appearing on Defendants' Exhibit 48, is that right? A. Yes.

Q. I now hand you the other record which you produced and ask you to state what that is. A. It is an invoice from the American Manganese Steel Company to the Brown Hoisting Machinery Company, invoice No. 37886, June 27, 1924, covering one tooth, pattern $\frac{30835}{1}$.

Q. What is the amount of this invoice? A. $8.78.

Q. Is there anything on the invoice to indicate that this amount has been paid to the American Manganese Steel Company? A. Yes, the invoice is marked vouchered June 30, 1924, voucher No. 456.

Q. Is there anything on this invoice which indicates the date the tooth casting $\frac{30835}{1}$ was received by the Brown Hoisting Machinery Company? A. This invoice was marked material described above received in good order July 1st, 1924, with signature of receiving clerk. This marking is found on the duplicate copy of the invoice.

Q. Where did you obtain invoice B-2170 dated June 27, 1924 and invoice No. 37886 dated June 27, 1924, which you have been testifying about? A. From the company invoice files of the Industrial Brownhoist Corporation.

(Narrative continued.) These records are under my custody and control. The invoices B-2170 and 37886 were compiled in the regular course of business and made contemporaneously with the transactions to which they refer, as far as I know. I found these papers in the original files of the Industrial Brownhoist Company.

Q. I now hand you what purports to be a photostatic copy of the original invoice 37886, two sheets, and a photostatic copy of invoice B-2170, and ask you to compare these photostatic copies with the original invoices and state whether or not they are true and exact copies thereof? A. Yes, they are.

Mr. Mahoney: The photostatic copies of invoices 37886, two sheets, dated June 27, 1924, and

invoice B-2170, one sheet, dated June 27, 1924, are hereby offered in evidence as one exhibit and the Notary is requested to mark the same "Defendants' Exhibit No. 51, Brown Hoisting invoices 37886 and B-2170, dated June 27, 1924, for side rake tooth $\frac{30835}{1}$ on Brown Hoisting Machinery Company order 200370."

Q. I now refer you to Defendants' Exhibit 50 and Defendants' Exhibit 51 and ask you to explain the apparent mutilation of the second sheet on each one of these exhibits. A. This is due to the fact that the price extension has been removed from the duplicate copy since it is not necessary in the department to which it is sent.

Q. That removal of the price extension portion of this invoice in the shipping department is a regular and established practice with the company, is that correct? A. It was up until a year or so ago, and was the practice at the time this invoice was filed.

Cross Examination by Mr. Edgerton.

Q. Did Mr. Sessions of the firm of Richey & Watts communicate with you yesterday regarding the testimony you were to give in these suits? A. Yes, he did.

Q. And did he ask you for an interview? A. He didn't exactly ask for that, no.

Q. What did he ask you? A. He asked me if I would care to talk to him about the testimony that I was going to give.

Q. And what was your reply? A. I told him that the same thing applied to me that applied to Mr. Rice.

Q. And what was that? A. Mr. Rice stated that he did not care to give any information regarding the testimony.

Q. You refused then to discuss this subject with Mr. Sessions, is that correct? A. Yes.

Q. Now with respect to the receipt of castings, the payment of the invoices, you have no intimate knowledge, have you, apart from what the face of the documents purport to show which have been identified as Defendants' Exhibits 50 and 51? A. No.

Deposition closed.

J. M. RICE, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is J. M. Rice. I reside at 14775 Elderwood Ave., East Cleveland, Ohio. I am 38 years of age. I am testifying under subpoenas in these cases. I am an accountant, employed by the Industrial Brownhoist Corporation, Cleveland, Ohio. I have been employed by this company for over 21 years.

Defendants' Exhibit 44 and Defendants' Exhibit 43 show thereon contract number D-4804 which was the contract for which the parts illustrated on these exhibits were to be applied. I have records to show with whom this contract was made. This is our invoicing record here, book copy of the original invoice rendered to the customer. The sheet number is page 2788, the date of the invoice is June 6, 1922. The invoice rendered on order No. D-4804 was to S. G. Cool, 128 North Wells Street, Chicago, Illinois, but the goods were shipped to Janesville, Wisconsin, June 2nd, 1922. The invoice called for one Brownhoist shoveling attachment with one yard shovel bucket for a No. 2 Brownhoist locomotive crane No. 8732. The total amount of the invoice was $980.00. Our records show that this amount of this invoice was paid by the customer on July 5th, 1922. We received a check in the amount of $994.00 which covered our invoice of June 6th in the amount of $980.00, and another invoice of June 16th in the amount of $14.00. The record from which I have just been testifying was obtained from the company files and is a permanent record. These records are under my custody and control as an employee of the Industrial Brownhoist Corporation, and were made in the regular course of business contemporaneously with the matter to which they refer.

Q. I now hand you what purports to be a photostatic copy of the invoice sheet 2788 for invoice dated June 6th, 1922, order D-4804, and ask you to compare it with the original from which you have been testifying and state whether or not this photostatic copy is a true and exact copy of the original invoice? A. Yes, it is.

Q. The second item on this invoice sheet 2788 refers to a contract other than D-4804, is that correct? A. Yes, that's correct.

Q. What was the record from which you obtained the information as to payment of invoice 2788 on con-

tract D-4804? A. That is our bookkeeping record which is kept under the name of the customer to whom the invoices are rendered.

Q. This account number page 2 of the bookkeeping record which you have just referred to is the original taken from your files, is it not? A. Yes, sir.

Q. And is made contemporaneously with the matter to which it refers in the regular course of business, is that correct? A. Yes, that's correct.

It is hereby stipulated that a photostatic copy of Brown Hoist Machinery Company page 2 of invoice record with S. G. Cool, 128 North Wells Street, Chicago, Illinois, may be offered in evidence with invoice sheet No. 2788 as one exhibit.

Mr. Mahoney: The photostatic copy of Brown Hoist Machinery Company invoice sheet 2788 and photostatic copy of page 2 of the bookkeeping record of the account with S. G. Cool is hereby offered in evidence as one exhibit and the Notary is requested to mark the same "Defendants' Exhibit No. 52, invoice sheet 2788 and account book page No. 2 of The Brown Hoisting Machinery Company referring to order D-4804 to S. G. Cool."

(Narrative continued.) Referring to Defendant's Exhibit 48, Brownhoist blueprint 150497 dated May 17, 1924, the material shown on this blueprint was made for the Freedlund Construction Company, Miami, Florida. This material shown on Defendants' Exhibits 47 and 48 was shipped to the Freedlund Construction Company at Miami, Florida, some time in August, 1924. I ascertained this date from the records of the Industrial Brownhoist Corporation.

Cross Examination by Mr. Edgerton.

I have been an accountant for the Industrial Brownhoist Corporation, outside of the first year that I was employed as a boy there, the entire period of my employment. I was in that department in the year 1922. The testimony I have given regarding the Freedlund Construction Company was not from memory but from looking up the records at our plant.

Q. But you have produced no documentary evidence at this hearing relating to that kind of transaction, have you? I refer to the Freedlund transaction. A. No, inasmuch as upon reference to our records I found that this

is a replace no charge shipment it was not necessary to render an invoice.

Q. Do I understand then that you have no invoice for the Freedlund transaction? A. Not for the replace shipment.

Q. You have testified that the material on contract 200370 was shipped to the Freedlund Company in Florida sometime in August of 1924. Now do I understand you to mean that this was a replacement order that you referred to when you so testified? A. Yes, that was a replace shipment, what we term a replace shipment.

Q. And because it was a replace shipment you have no invoice and have not produced any other documentary evidence, is that correct? A. Yes.

Q. Did Mr. Sessions of the firm of Richey & Watts, counsel for the plaintiff in these suits, interview you yesterday? A. Yes.

Q. Did he make inquiry as to the nature of the Industrial Brownhoist or its predecessor's developments which were considered relative to the issues in these suits? A. No.

Q. What did he ask you? A. He wanted to know what I knew about this suit.

Q. And at that time you had already been interviewed by counsel for the defendant, had you not? A. No.

Q. When were you interviewed by counsel for defendant? A. This morning is the first time I met either one of them.

Q. Had you been interviewed by anyone else acting for them previous to Mr. Sessions' interview? A. That is, outside of our own company?

Q. By anybody? A. Yes, by the man in charge of our patent department.

Q. Did you refuse to discuss the matter with Mr. Sessions? A. Yes.

RE-DIRECT EXAMINATION by Mr. Mahoney.

Q. Were you ever instructed by counsel for either the Osgood Company or the General Excavator Company not to give any information regarding the matters about which you have testified today to counsel for plaintiff, Richey & Watts, or their representatives? A. No, I was not instructed.

Q. You were acting then purely on your own responsibility in refusing to give information to Mr. Ses-

sions of the Richey & Watts firm? A. Yes, that is correct.

Q. And at the time you were approached by Mr. Sessions you were under subpoenas in both of these suits, is that correct? A. Yes, that is correct.

Re-Cross Examination by Mr. Edgerton.

Q. Was it not upon the advice of the man in charge of your patent department that you refused to discuss this matter with Mr. Sessions? A. No, it was my own responsibility entirely.

Deposition closed.

Certificate of Notary omitted.

Mr. Reed: I will offer at this time the following exhibits which were offered in connection with the Bolgiano, Fay and Rice depositions:

Exhibit 42, which is the front cover and inside thereof and page 4 of booklet No. 10; as Exhibit 43, a blueprint 144566; as Exhibit 44, Brown Hoisting Company blueprint 144515; Defendant's Exhibit 45, Brown Hoist Pattern No. 29332; Exhibit 46, Brown Hoist blueprint 150495; Exhibit 47, Brown Hoist blueprint 150499; Exhibit 48, Brown Hoist blueprint 150497; as Exhibit 49, Pattern No. 30835; as Exhibit 50, Brown Hoist invoice 14012 of April 26, 1922; as Exhibit 51, Brown Hoist invoices of 37886 and B2170 of June 27, 1924; as Exhibit 52, invoice sheet 2788 and account book, page 2, with reference to the order of S. G. Cool.

I also offer the depositions of William C. Bolgiano, George Fay and J. M. Rice.

For the sake of the record I wish to call attention to the fact that the two patterns, Exhibits Nos. 45 and 49, are entitled in the Osgood case; but inasmuch as they will not be used in that case we are substituting the original patterns for the photographs which has been offered originally in the General Excavator case.

The Court: Why not offer them both?

Mr. Mahoney: We are not sued on them.

The Court: You are not withdrawing the photographs, are you?

Mr. Reed: No. We have the photographs here. There would be a duplication in numbers. Would you prefer to have them left in the record?

The Court: I thought that the Circuit Court of Appeals might like to have the photographs as physical exhibits.

Clerk: You do not want them marked?

The Court: They were marked before.

Clerk: Before the notary; but we have the same numbers.

The Court: You could mark those physical exhibits with an A-number.

Mr. Reed: I will just make an offer of them then.

I also offer as Defendant's Exhibit 45-A a photograph of the pattern of Exhibit 45; and as Exhibit 49-A, a photograph of the pattern of Exhibit 49.

DIRECT EXAMINATION of Walter Ferris (Resumed).

Q. Mr. Ferris, are you familiar with the fourth Downie patent, 1,716,432? A. I am, yes.

Q. Have you read and do you understand the claims 1, 14, 16 and 18 of that patent? A. I do.

Q. Will you state in a general way the construction which is described in claims 1, 14, 16 and 18 of this fourth Downie patent? A. These claims describe in a general way teeth for attachment to the sides of the scoop, having leading points to enter the earth with the cutting edges disposed horizontally, followed by vertical edges shaped in such a way as to force the material inward towards the scoop.

Q. Have you knowledge of any prior art patent or patents showing side teeth which divided the material along a vertical plane and turn the same toward the dipper, either in connection with or without an advance penetrating point? If so, will you please explain the two structures of those patents? A. I refer to Butler, 493,421, the structure of which is shown on chart 58.

The Court: Is that Butler?

Witness: I beg your pardon—chart 59. The cutting elements of this scoop are all comprised in a bent plow or blade extending across the cutting edge of the scoop, and up on both sides of the scoop. At each corner there are formed two tooth surfaces.

The Court: Will you use the pointer?

Witness: I beg your pardon. I cannot remember. At each corner are formed two tooth surfaces, a horizontally-divided edge markd n-prime, and a verfical beveled dividing edge marked t. The effect of these edges is to perform a function very similar to the function stated

in these claims; the horizontal edge dividing the earth, and the vertical edge sharply beveled inward tending to crown it into the scoop. I also note that the vertical side extensions of this cutting blade lie in advance of the pivot pin on which the drop bottom swings and protect it.

I also refer to—I shall have to ask whether this patent 508,685, corresponds to the re-issue 11516? I am using a re-issue number.

Mr. Reed: I think not. I will have to see the chart. No.

Witness: I will have to cancel reference to Davey chart 58.

The Court: Cancelled.

Witness: E. J. Davey, 508,685. This patent shows a scoop having across the front a cutter blade C, turned up at both ends and secured to the sides of the scoop. Attached to this cutter blade or lip are five earth-dividing teeth C-prime, with their cutting edges lying in a horizontal plane. Two of these earth-dividing teeth are fitted closely into the corners where the end-extensions of the cutter blade C turn upward. The vertical extensions are beveled backward toward the rear end of the scoop at an angle of approximately 45 degrees, and are also beveled inwardly to form bevel cutting edges which divide the earth in a vertical plane and crowd it inward into the scoop. These upward extensions on the two ends, taken in connection with the horizontal earth-dividing teeth C-prime fitted into the corners, perform quite accurately the functions described in the claims.

The Court: Would you say they stand out to the side as far as these rake teeth do in this fourth Downie patent?

Witness: No, sir, they are not nearly as thick as the rake teeth, but they are thicker than the bail pivots which lie in the rear of them and which they serve to protect.

The Court: I see. All right.

Witness: The third reference is patent to Hemme, 1,233,574. This structure is called an earth-cutting blade and resembles quite closely the construction of the cutting blade just described in connection with Davey, 508,685.

The Court: What is the use for that third cutting blade?

Witness: This is probably a road scraper. I have not read this patent thoroughly through.

The Court: Used for a leveling process?

Witness: Yes, sir, for shaving, skimming, grading roads, apparently, from the picture. The two ends of this cutter blade are turned up into edges beveled vertically, and also beveled inward forming the side cutting teeth, and there is an earth-penetrating tooth fastened to the blade closely adjacent to each corner. In this case, I think the function of protecting the pivots is now shown because there are no pivots in the rear of the blade.

Q. Have you ever seen a General Excavator scoop equipped with side rake teeth of the type shown in Defendant's Exhibit P-27,—referring more particularly to the photograph marked F? A. I have.

Q. Do you get the question? A. Seen a General Excavator scoop equipped with this tooth.

Q. Yes? A. Shown on photograph F of P-27.

The Court: Let me see that (shown court).

Q. Can you produce a tooth of the type shown in Plaintiff's Exhibit P-27? A. We have such a tooth on the floor.

The Court: P-27-F.

Mr. Reed: Yes, P-27-F.

(Shown court.)

Thereupon, court was adjourned.

March 12, 1931, 9:30 a.m., trial resumed.

Mr. Reed: Mr. Richey, I understand that you do not claim there is any infringement in the present General Excavator side rake teeth.

Mr. Richey: If my understanding of it is right.

Mr. Reed: It is shown in this assembly chart of the General Excavator Company, and there has also been one lying over here on the floor since yesterday noon. I presume you have seen it.

Mr. Richey: Of course, as I say, we bought one the other day from one of their branch offices that wasn't like this.

Mr. Reed: You said the American Manganese Steel. The American Manganese Steel never cast any teeth for the General Excavator Company.

Mr. Richey: Well, the facts are that it was sold by one of your branches—branches or dealers.

Mr. R. R. Downie: General Excavator Sales Company, Mr. Richey.

Mr. Richey: Is that a branch, or dealer?

Mr. Reed: I don't know. I understand there are no branches, but I cannot make a positive statement on that.

Mr. Richey: We don't charge that this tooth shown in your chart Defendants' Exhibit 81 is an infringement.

The Court: Well, does that eliminate that from the case then?

Mr. Richey: No, sir, it does not eliminate that tooth there on the desk.

Mr. Reed: The tooth on the desk, concerning which the witness has been testifying, is the tooth shown in your Exhibit 27, a few of which were used at one time by the defendant, The General Excavator Company.

The Court: But are not used any more?

Mr. Reed: Not used at the present time; haven't been used.

Mr. Richey: Have you given that an Exhibit number?

The Court: It is marked 4825L.

Mr. Reed: It has not been offered yet.

The Court: Are you going to predicate infringement on the isolated sale of some subsidiary, or something like that?

Mr. Richey: No. In the beginning they sold a number of those, by their own admissions.

Mr. Reed: Not in the beginning, but at an intermediate point we used a comparatively few of them.

Mr. Richey: Well, I will say in the beginning of the term of the patent.

Mr. Reed: Yes.

The Court: That was 31 of them?

Mr. Reed: Since the patent issued, yes.

Mr. Richey: As I said yesterday, we indicated that we were willing to drop this patent out if they said they didn't have an intention of making or selling or using any more of them. And I understood Mr. Reed agreed to that, but then when we come to make that statement he didn't want to agree to it, and in the face of the fact that we just bought one the other day, we think that there may be some question about that.

The Court: Well, of course, that may be something that had gotten into somebody's stock and remained there a long time.

Mr. Richey: Well, it may be that, and on the other hand it may be that his clients are mistaken. Might still be making those. He hasn't shown by any proof—of course I have no doubt what Mr. Reed says is so, but

what he states is in conflict with what we have found. If he wants to put somebody on the stand to show that they only made and sold 31 of them during the term of the patent, and have not made or sold any of them since February, 1930, and don't intend to use or make any more of them, why I think we are willing to dismiss the case without prejudice, as far as that patent is concerned, but we cannot get him to do that.

Mr. Reed: We don't think we infringed the patent, and we don't see any reason for tying ourselves up indefinitely. I haven't authority to do so. The only man who has authority to do it is not here. And this matter—there was nothing said about the intention when we discussed this matter. I stated yesterday that I was informed that it was not the present intention to resume this tooth. Beyond that I have no authority, and if he insists on anything further than that, why we will have to go ahead.

Mr. Richey: I don't want to bother the court with anything that is trifling—we have already done a great deal on this thing, and have a good deal of money behind it, and we don't want to go through that if we are assured that the thing is trifling. But we *think* they must assure us on that point.

Mr. Reed: I submitted to you a memorandum taken from the records of the General Excavator Company, which showed in detail the sale of 31 teeth. Now, that is all we have.

Mr. Richey: But declined to say you didn't intend to go ahead.

Mr. Reed: Yes—bind ourselves for all future.

The Court: As far as you know, you have no present intention?

Mr. Reed: That is all. That is as far as we care to go. If we are going to be enjoined—

Mr. Richey: If we dropped the case with respect to that patent, they might go out tomorrow and go at it again.

The Court: Well, you could start out, you know, day after tomorrow and you have a stipulation about the depositions, haven't you?

Mr. Richey: Yes, sir.

The Court: Wouldn't hurt you so much to be back here some time. Always glad to see you here.

Mr. Richey: Well, that is certainly an inducement. That is a very persuasive item. But I should think that

these gentlemen could say for the record that they don't intend to go ahead.

The Court: Some of this patent might not be sustained, you know, some time. I don't know whether it will be or not. And they probably don't want to cover that contingency.

Mr. Richey: Well, we would like to have it settled, one way or the other.

The Court: Well, it is up to you men.

Mr. Richey: Suppose you put somebody on the witness stand and make a record of those things. Let's make the proof.

Mr. Reed: I don't think that is necessary. We haven't anybody here that could testify to the records. This memorandum was taken from the records by a man in Marion, and there is no one here who can testify of his personal knowledge as to that record. It is a mere matter of accounting; don't make any difference here.

Mr. Richey: Well, I think we might clear the situation up, Your Honor. If they put somebody on the witness stand to prove what they propose to do and what they have done. I have no doubt that Mr. Reed has confidence in what he says, but I don't know whether his client would abide by what he thinks or not.

Mr. Reed: I think, Your Honor, we will go ahead with the case.

The Court: All right.

Walter Ferris, a witness for defendants, recalled, and testified as follows:

Direct Examination by Mr. Reed.

Q. Mr. Ferris, referring to the tooth which you have before you and which was at one time manufactured by the General Excavator Company, what have you to say as to the shape of that tooth, particularly with relation to its tapering toward the upper end? A. I would say that it does not taper toward the upper end.

Q. Does it have a material dividing edge extending longitudinally for the greater portion of its length? A. It doesn't, as far as I can see.

Q. Well, does it have any shearing edge extending longitudinally? A. No, it has a round notch near the point.

Q. How many earth-dividing edges have you? A. I would say one.

Q. And that is the transverse point? A. Cutting point.

Q. At about what angle is the upper surface of that tooth with relation to the horizontal; that is, the horizontal when the bottom of the dipper is in a horizontal position? A. As far as I can see, without the assembly, I guess it would be 35 degrees. That is, taking the bottom of this cutting edge as horizontal; of course, that should be elevated a little bit. 35 or 40 degrees, possibly. I think 35 is the nearest degree I can make.

Q. Well, in the practical operation of digging, do you consider it important that the earth dividing edges should be sharp? A. It depends on where they are. In the practical operation of digging, the actual separation of the material, the sharper the edge, the better.

Q. Now, you have referred to a notch or recess, or curved indentation on the inner side of that tooth. After the tooth has penetrated the material, would this recess give any assistance in the digging operation? A. I think not. The material at that time would be broken up, and come loose right up at this point; any material that is loosened at that point would be in a broken condition when it strikes here (indicating).

Q. By "here", you mean at the location of the recess? A. The location of the notch.

The Court: How many inches from the point, so that the record will show; about how many inches?

The Witness: The widest part of the notch is about 6 inches back from the point of the tooth, by eye.

Q. If that recess were filled in, what would be the effect on the action of the tooth? A. I don't think it would have any perceptible effect; you couldn't tell it. Weld it up solid on the tooth, and you give the same digging effect, as far as anybody could find out.

Q. Then as far as the digging operation is concerned, you are of the opinion that that notch or recess is absolutely valueless? A. Quite unimportant, yes.

Q. Referring again for a moment to the assembly chart of the General Excavator scoop, which is Exhibit 81, I believe.

The Court: Yes, that is right.

Q. Will you please state whether the bolts 6 which extend through the angle plates of the dipper are extended through the channels of which the ditcher stick is formed, or through the spaces between the channels? A. They extend through the channels.

Mr. Reed: I would like to offer in evidence the tooth formerly used by the General Excavator Company, and concerning which the witness had been testifying, as Defendant's Exhibit 82.

The Court: You think we ought to save this exhibit number on the side, Mr. Richey, for this suit?

Mr. Richey: I think that is the code number.

The Court: It is 48251.

Mr. Richey: That certainly won't get lost off.

Mr. Reed: I would also like to offer as Defendant's Exhibit No. 83 a certified copy of the file wrapper and contents of the Downie Patent 1,716,432.

The Court: The fourth Downie patent?

Mr. Reed: Fourth Downie patent, yes, sir.

The Court: Are those file wrappers of those other patents in the record of the previous case, Mr. Richey?

Mr. Richey: The Clutter and first two Downie patents. I know it was the Clutter patent, because there was an argument made on the file wrapper. I am satisfied the other two were, but just to be certain I will check.

Mr. Reed: That is all, Your Honor.

Mr. Corbett: I have about three questions, Your Honor.

DIRECT EXAMINATION by Mr. Corbett.

Q. You went to the Sam Davis coal yard and examined the structure of the connecting bolts—bolts for connecting the ditcher stick and brace of the plaintiff's modern machine by disconnecting these parts the other day, did you not? A. I did.

Q. Will you please state whether the bolts which effect this connection were in shear or in tension, giving your reasons therefor? A. They were in shear and in tension. The reason they are in tension is because they are pulled by that notch which always puts a bolt in tension, and also the weight of the dipper undoubtedly hangs on them. I know they are in shear, because they are finished to turn on the outside, and are in bored holes which fit the holes within a 1/32 of an inch, so that before the scoop could make any turning movement relatively to the stick, the bolts would get the side stress which indicates shear. And I also know that they were in shear because we removed one bolt, and the side surface of that bolt had a high polish on, which only comes

from reaction of the shearing stresses, trying to shear it off.

Q. Have you examined the bolts on the defendant's structure, particularly the bolts which extend substantially parallel with the ditcher stick, and if so, will you say whether those bolts were in tension or in shear, giving your reasons? A. Those bolts were also both in tension and in shear. The reason of their being in tension is the same as just stated for the plaintiff's machine, in that they are pulled up with bolts, and the weight of the dipper more or less hangs on them, probably largely. I know that they are in shear because they have to be driven into the holes to get them in. The holes in this case are not accurately bored as they are in the plaintiff's machine at the Sam Davis yard; they are a little larger than the bolts, and the bolts are rough, but the bolts have to be driven in to get them in place, and they must take shearing stress.

Q. I refer you to Downie patent 1,709,466, and particularly to Fig. 6 thereof, and call your attention to the members 28 which are in the inner surfaces of the spaced channel members. Will you compare that structure with the Osgood structure as to that point, and state whether or not any differences exist, pointing out such differences if they do exist? A. In the Osgood machine?

Q. Yes. A. In the Osgood machine the two inner connecting or clip angles 27 are replaced by a single U-shaped member extending across the space between the inner webs of the channels and extending up both sides; in other words, the two angles are made into one U-shaped strap.

Q. Which would you say was the stronger construction? A. The U-shaped strap is stronger.

Mr. Richey: Those file wrappers of the first and second Downie patent were before the court in the Cleveland case, Your Honor.

Mr. Reed: I would like to ask one more question of Mr. Ferris, Your Honor.

The Court: All right.

DIRECT EXAMINATION by Mr. Reed.

Q. Mr. Ferris, in the connection of the General Excavator digger stick to the scoop, was there any feature of attaching bolts, or bolt, within and between the channel irons in which the ditcher stick is formed? A. There was not.

Mr. Mahoney: We hereby offer in evidence Defendant's Exhibit 84, chart No. 20.

We hereby offer in evidence defendant's chart No. 60 as Defendant's Exhibit 85.

Charts Nos. 45 and 46 are offered in evidence as Defendant's Exhibit 86—45 will be A, and 46, B. We offer in evidence defendant's chart No. 40 as Defendant's Exhibit No. 87.

We offer in evidence defendant's chart No. 17 as Defendant's Exhibit 88.

We offer in evidence as Defendant's Exhibit 89, defendant's chart No. 14.

We offer in evidence as Defendant's Exhibit 90, defendant's chart No. 13.

We offer in evidence as Defendant's Exhibit 91, defendant's chart No. 101.

Cross Examination by Mr. Richey.

Q. Mr. Ferris, referring to the thing that you have just been discussing, about these bolts, the assembly bolts connecting the stick to the bucket—you say that there are stresses and strains, I mean shearing stresses and tension stresses on the bolts. That would be true in all three of the constructions, that is, the plaintiff's and each of the defendants', according to your way of looking at it? A. Yes, sir.

Q. And in that respect they would all be alike? A. Yes.

(Narrative continued.) I have not made any calculations to determine what proportions of the force is shearing and what proportion is tension in the plaintiff's machine. I know of Arthur W. Robinson of Milwaukee, Wisconsin. He is dead. I knew him casually while he was alive. I met him a few times. He was employed by the Bucyrus Company before I was. I know of his work of course. I am not employed by the Bucyrus Company now. I am not employed by any manufacturer of excavating machines now. I said I took out about seventy-five patents. The patent to Walter Ferris 809436 assigned to the Bucyrus Company is one of my patents.

Q. That patent consisted merely, or that invention—of course you took an oath that you believed you were the inventor at this time? A. I didn't understand the question.

Q. You took the usual oath that you believed you were the inventor involving the construction at the time you filed this application? A. Yes, sir.

Q. And you continued to hold yourself out as inventor until the patent expired? A. Surely.

Q. Now, the only improvement in this construction was in making adjustable one end of this link k over the construction in the patent to Mr. Robinson that I just mentioned. That is, you took the Robinson patent, and made an adjustment between one end of the link—between the front end of the bucket and the stick? A. The Robinson patent also has an adjustment. I designed a different adjustment.

Q. Yes, but that is what your invention was in that patent? A. Just a method of making that adjustment, as I remember it. I haven't read this claim for some time.

Q. Well, now, the first claim calls for a number of elements, and I am going to ask you if they were not all old. It calls for a bridge dipper, a handle, a brace, a journal bearing, and means for adjustably securing said bearing to the dipper handle. Now, all of those elements were old when you made this, weren't they? A. What does the journal bearing mean?

Mr. Corbett: Your Honor, I believe that is immaterial.

Q. A journal bearing to which the other end of said braces is pivoted. I assume that one at "1". A. I think it probably means the one at "g."

Q. Well, in either event, they were all old, weren't they, as elements? A. I don't remember anything—Oh, you mean a journal bearing in a machine?

Q. Yes. A. Oh, sure.

Q. So this invention consisted of a new combination of old elements? A. Are those all the elements in my claim?

Q. Well, read the claim. Those are all the elements. A. A means for adjustably securing said bearing to the dipper handle.

Q. Yes, that was old, wasn't it? A. Not the means for adjustably securing it.

Q. Not that particular means, but that particular sort of adjusting means was old in the art? A. An adjustable means was old.

Q. Well, that particular adjustable means was old? A. No, I think not.

Q. You think that was a new element? A. Sure.

Q. Just having two sets of cog teeth, so you could set one— A. I think there were two sets of intermeshing cog teeth.

Q. Now, that is not cited in that claim, is it? A. Let me see the claim. (Reads) "Means for adjustably securing said bearing to the dipper handle."

Q. You say that is a new element, do you? A. To the best of my knowledge.

Q. All the rest of the elements in there were old? All the rest of the elements in that claim were old at the time? A. As I remember it, yes, sir.

Q. Now, you have taken out a number of patents in which the only thing that was new was the combination of old elements, haven't you? A. Quite likely, but I would like to see the patents before I say.

Q. Well, you recognize that doctrine, don't you? A. Sure; in the combining of old elements, introducing new and beneficial results.

Q. Now, the only result you produced here was a different kind of adjustment on one end of the link? A. Produced an adjustment that wouldn't wear loose and rack, yes.

Q. That was the only invention in this involved? A. That is all we were after.

Q. You provided that with different adjustments so that you could vary the angle of the cutting edge to the stick, did you not? A. No, sir, so we could hold the adjustment when it was made.

Q. But incidental to that—and I suppose that was the feature of Mr. Robinson's patent—you did provide for adjustment there at the end of the link, so that you could change the angle of the teeth to the stick? A. Surely.

Q. Why did you want to change that angle? A. So that we could alter the cutting rake and the teeth.

Q. Why was it important to do that? A. Because of different digging conditions; different kinds of soil.

Q. Is there any importance in the digging to put that at the proper angle to the earth? A. Yes, sir, there is some importance.

Q. Why so? A. Because of the different degrees of difficulty in penetrating the different kinds of material.

Q. Of course it is important that the teeth should attack the material at the best angle, is it not? A. Yes, sir. Many times you do not know what the best angle is.

Q. So you adjust it so as to give it what you think is the best angle? A. Yes, sir, it is important for digging to present the teeth at the best angle, or the angle which the owner of the machine thinks the best.

Q. You provided this adjustment so that when you once got what you thought was the best angle, you had a firm and rigid connection, did you not? A. That is right.

Q. That is important, when digging, to have a rigid relation between the dipper and the stick, after you once made the adjustment? A. That patent is not directed towards rigidity of the relation.

Q. I am asking the question independently of the patent. A. Please repeat the question.

Q. After you have once gotten your adjustment you think best for the attack on the material, it is important to have a rigid relation between the stick and the dipper so as to maintain that adjustment, is it not? A. Yes, sir.

Q. That is what this patent was for? A. No, sir.

Q. That was the only improvement you had over the Robinson patent, was it not? A. That patent, as I tried to say a minute ago, was directed toward getting a connection which would not wear and become loose, would maintain itself after it was made; not the rigidity, but the durability.

Q. If it was not only important to have it rigid, but to have such a connection it will not wear, so as to relax that rigidity, was it not? A. Yes, sir.

Q. That was what this had over the Robinson patent? A. Yes, sir.

Q. You considered that so important you took out a patent on it? A. Absolutely.

Q. Will you look at the Butler patent No. 493,421, which you discussed—

The Court: In mentioning the side rake tooth?

Mr. Richey: No, I think—maybe that, too, Your Honor—but I think he first discussed it in connection with the first Downie patent. I believe a view of the bucket is shown in it.

The Court: It is your chart 59.

Mr. Richey: Yes, you can get that chart out, if you like.

The Witness: I have it here; 493,421.

Q. Your association with this excavating industry has been quite extensive, has it not? A. As I stated.

(Narrative continued.) I do not know whether or not the bucket of this Butler Patent was ever used com-

mercially. It speaks of a scraper, well, a scraper—originally, probably, the name probably originated in machines which were dragged along the surface by horses or tractors for grading roads and that sort of thing, which dug and skimmed the cut. This particular bucket is apparently organized for that work; also designed to be handled on a drag line machine.

Q. What are those discs, 411 out in front there for? A. I believe they are to cut.

The Court: Point it out.

The Witness: Yes, cuts in advance of the machine.

The Court: Are they in advance?

The Witness: Yes; the cutting discs to divide sod or any other material which might be in front, so that the teeth can cut it up more easily, as I understand it.

(Narrative continued.) Referring to Davy reissue patent 11,516 I am not acquainted with the commercial application of this device. As to whether it was intended to be used as a scraper with horses, my recollection does not go to any statements of a scraper. I will have to look at the specifications. At the beginning of the second paragraph of the specification it says: "My invention relates to improvement in the class of so-called scrapers. It shall be especially serviceable for sewer excavation, and which will afford a material improvement in the class referred to."

Q. Have you the same patent I have? A. Line 18, first page.

Q. What I am calling your attention to is line 8.

The Court: He wants to call your attention to something else, apparently.

Q. Take line 18. A. Yes, sir.

Q. My question is, what is a scraper? A. A drag line bucket is the nearest I can label this one; call it a scraper, scoop, drag line, bucket, dipper,—anything you want to.

Q. A scraper is a machine, that is,—a drag line is a different class of machine, as I understand it.

Q. It is one of the things used for digging ditches before the ditching machine came into use, was it not? A. I think the name went over—

Q. Answer my question, if you please. A. Repeat the question.

Q. I asked you if the drag lines and these horse-drawn scrapers were not machines used for excavating

ditches prior to the use of the ditching machines such as involved in the patent in this case? A. No, sir. I would say that a horse-drawn scraper was never used for excavating anything that would be called more than a gutter.

Q. Let us call a gutter a ditch. A. No, sir, I would not call a gutter a ditch.

Q. Limiting the question to the drag line, that was used for digging ditches prior to the use of the ditching machine such as involved in these patents in suit here; that is correct? A. A drag line was used prior to back-hoe ditchers?

Q. Yes? A. Yes. I want to qualify that. Excuse me. Just wait. I don't know the earliest dates of these dippers. I want to qualify that answer.

(Narrative continued.) As to how long these back hoes have been used, if you mean the Keystone back hoe ditcher, I know how long it has been used, but as to the other back hoes shown in these patents in suit, I don't know, the earliest date at which a back hoe was in use. I never designed back hoe machinery. I never operated them. I have seen them operate. That is my only experience. I have seen the Clutter machines operating between 1914 and 1921, that is, casually. I knew they were in quite general use but I don't know the date at all, somewhere between 1914 and 1921. Referring to Davy reissue patent the member designated with small e that runs out in front of the scraper is what we would call a plow probably. Its function is to divide the material ahead of the bucket. To state how the Davy buckets closed I would have to refer to the specifications. On line 69, page 2, it reads: "Thereafter, when the scraper is again lowered into its filling position by raising at the bottom on the ground, the dogs F will automatically re-engage." Apparently he closed that by letting it down and letting the bottom hit the ground.

Q. In that construction, most of the bucket is dropped when it is opened, is it not; that is, more than the bottom is dropped; the sides are dropped too? A. As I stated, when presenting it, the sides and the bottom are of the same structure.

The Court: It is not a drop bottom?

A. Not strictly.

Q. Will you turn to the Pugh patent 806,288, which you discussed during your direct examination. A. I have a chart on that, chart 22.

Q. Do you know if that machine was ever used commercially? A. No, sir, I don't know.

Q. That bottom is closed by snagging the teeth into the bank or some other place, is it not? If you look at line 45, page 5, I think it will help you if you have not read the patent. A. What page?

Q. Page 5, sir. A. What line?

Q. Beginning 45. A. Yes. This shoulder is adapted to engage a spring-controlled lever-detent n pivoted on the rear end of the bucket, so that as the teeth on the front end of the bucket engage in the bank, and the pressure thereon causes the bottom of the bucket to close, said lip or shoulder is engaged by the detent n-10.

Q. That is what is known as a snag closure, is it not? A. That term is not familiar to me.

Q. In the Pugh patent, there are at least four power-controlled members controlling the bucket in its cycle, are there not? A. I find a line raising the line end 17, which is the digging line, or which operates the digging line; a line for raising the boom.

Q. What is the number? A. I cannot see it here. You can say it is reeved through the block 28 near the point of the boom; and then there is a line which seems to be M, which lifts the bucket; and there is a thrusting gear on the dipper stick.

Q. And then there is a line N-15 too, is there not, that runs along parallel to the bank? A. That is the same line as N-17, in effect.

Q. Then your answer to my question would be yes, there are at least 12 power members? A. Acting on the scoop?

Q. Yes. A. Yes, sir.

Q. You were asked to read some of these claims on some of these structures. Does claim 9 of the first Downie patent, 1,511,114 read on this Pugh patent, 806,-288, in your opinion, in the same manner in which you read it on these other constructions during your direct examination?

The Court: Somebody had better read it to him and see if he can find the corresponding elements.

Q. You have not tried it before? A. No, sir, I don't think I have. Want me to go ahead with it?

Q. Yes.

The Witness: In an excavating machine the combination of a tiltable boom,—2 in red; a ditcher stick

pivoted at one end to the outer end of the boom,—that does not seem to read; I say it does not read on that claim.

Q. Will you answer the same question with respect to claim 10? A. An excavating machine with a combination of a tiltable boom,—2; a ditcher stick,—shown in orange; means for pivoting the outer end of the boom to the ditcher stick at a point below the upper end of the stick—I would say that claim does not read.

Q. The same question with respect to claim 11? A. That claim does not read.

Q. The same question with respect to claim 12? A. The same answer.

Q. The same question with respect to claim 13? A. The same answer.

(Narrative continued.) Referring to Pugh patent 1,316,058, I do not know whether that was ever used commercially or not. As to whether it is a drag line with a snag closure, I don't remember what the specification shows; the construction of the bucket, I would say, is intended to close by dropping it on the ground,—if you can call that a snag closure. On Figure 1 with a member 16, is a line not a stick.

Referring to Pugh patent 1,339,606, I do not know whether or not that machine was ever used commercially or not. As to whether that is a drag line with a snag closure or closed by dropping the bottom on the ground, as a matter of fact a bucket of that type can be snapped shut. I don't know how it was intended to be closed.

Q. Look at the Wagner patent, 1,225,537. Do you know if that machine was ever used commercially? A. To what features do you refer?

Q. Was that bucket— A. The scoop and boom construction?

Q. I think you talked about the bucket; was that kind of bucket ever used commercially? A. Yes, sir, that is a typical skimmer scoop.

Q. That particular type of bucket shown in there you know was used commercially? A. What do you mean?

Q. The one shown in the drawing; that is the one you talked about in your direct examination, as I remember. A. On direct examination I talked about the form of the drop bottom and the attachment of the teeth to the bucket.

Q. I am asking you if that kind of bucket shown in that Wagner patent, with all its accessories, bottom and so forth, was ever used commercially to your knowledge? A. To the best of my knowledge it has been.

Q. Did you ever see one in use like that? A. To the best of my knowledge, I have; but I cannot be positive of the exact details you refer to.

Q. As a matter of fact, you do not know of your own knowledge whether that particular bucket shown in that patent was ever used commercially? A. As distinguished from other scoops of practically the same construction, I cannot say positively.

(Narrative continued.) Referring to Clutter patent 1,107,899 I am quite certain I have seen it. I am trying to give my own knowledge. I would say I have seen those buckets in operation. I will not say they were just like that. I never saw a bucket just like this; never saw a bucket with slender teeth 43 like that, which would break off as soon as it gets in a bank. Referring to the three men George A. Morison, W. W. Bager, Otto F. Kaeser, names of the inventors in the Morison patent, two of these men were working under me at the time this scoop was designed; one was a secretary of the company. I would say that two of them were very capable designers; and the other one would not claim to be exactly a designer. I will say that they invented the scoop and I designed it. When in my direct examination I stated that I designed it, I meant I supervised the design of the scoop after the outlines, as shown in the invention, were provided, and laid it out. I was cognizant of the entire development. I said there was only one of these scoops made according to this patent. It was made for an outward arc machine. I think I stated on direct examination the purpose for which it was designed. The purpose of this design of scoop was to equip the outward arc machine with a bucket which would dump either in the usually high position, or would deliver its load in a car placed on the pit floor.

Q. You have discussed the scoop of the Butler patent, that of the Davy patent, that of each of the three Pugh patents, that of the Wagner patent, that of the Clutter patent, and that of the Morison patent; which of those scoops do you think comes nearest like the scoop employed in the patents in suit in this case?

Mr. Richey: Have you the blue prints and photographs of the big scoop he testified about?

Mr. Corbett: The Bucyrus scoop?

Mr. Richey: Yes.

Mr. Corbett: I have not.

Mr. Richey: You do not know where they are, do you?

(The witness refers to a chart.)

The Witness: Will you give me those numbers again, please? I would like to glance at these drawings.

Q. All of the patents you discussed,—Butler. A. What number?

Q. 493,421; Davy reissue, 11,516; Pugh, 806,288; Pugh 1,316,058; Pugh 1,339,606; Wagner, 1,225,537; Clutter, 1,107,899; and the Morison, 1,249,805. I understood those were all the patents you discussed in connection with the first Downie patent.

Mr. Corbett: Let me make a list of those patents, Mr. Richey.

Mr. Richey: Yes, I will.

(Counsel lists patents.)

The Witness: Is that question intended to include all of the scoops and buckets I discussed, or for all the patents?

Q. I think it was the patent you discussed. A. Does it include the Bucyrus scoop?

Q. That was not a patent; I was taking up the patents. A. Referring to patents. I would like to ask you for a qualification of that question. You mean appearance or function or both? What does "like" mean?

Q. It means with respect to its ability to perform functions that operate as do the scoops of the patents in suit. A. Both as to form and ability to dig?

Q. Well, operations and functions, I said; in other words we have talked about a lot of patents here and I think we can limit the court's inquiry to what are the best ones.

The Court: What you are trying to get are the patents in the prior art which are nearest to this controversy.

Mr. Richey: That is right, Your Honor,—in his view.

The Witness: I want to qualify the answer. As to form and appearance, the Clutter, 1,107,899, and Wagner, 1,225,537, are substantially the same in form and most nearly resemble the Downie bucket; while in dig-

ging qualities and ability to do the work, the Morison patent is better than either one of them; and the Bucyrus, if I can bring that in.

The Court: Morison is better?

The Witness: In the ability to dig and do the work, Morison is better than either one of them; and the Bucyrus modification is the best.

(Narrative continued.) By Bucyrus I mean the one shown in blue print Exhibit No. 7. If I had the pick of the scoops to be used on ditching machines such as are covered by the patents employed by the defendant I would pick that shown in Exhibit No. 70 and make the necessary modifications to make it clear itself.

The Court: What is the number of the patent?

Mr. Richey: It is not a patent; it is the Bucyrus scoop.

(Narrative continued.) There were only two of the Bucyrus scoops made. That is all I know of; I am quite sure there were only two made. They were for an outward arc machine.

Q. That is Exhibit 70, and shown in photographs Exhibits 71 and 72. In this photograph 71, this car shown here is an ordinary, standard railroad gondola car, is it not; and that track is a standard railroad track? A. A standard track, but I cannot identify the car. I think it is—

Q. Here is a glass.

(Counsel hands witness magnifying glass.)

A. It is the car body of either a wrecking crane, or some digging machine.

Q. But it is the regular size railroad equipment? A. It is the standard gauge.

Mr. Richey: Yes, that is what I mean.

The Court: What is the number of the Morison patent he refers to?

Mr. Corbett: 1,249,805.

The Court: Was that in the Cleveland suit?

Mr. Corbett: That was in the Cleveland suit, Your Honor. We have offered some contradictory testimony about the Cleveland situation.

(Narrative continued.) To adapt the Bucyrus scoop shown in Exhibit No. 70 for the ditching machines such as are involved in the patents in suit, the principal

change would be changing the angle of attachment of the dipper stick to get the proper lead for digging, and to change the design of these outer teeth which are not attached to the door so that they could cut ample clearance to pass the bail in the ditch. No other changes that I think of now. You could make a different kind of side teeth. Those, as far as I would think, would make the bucket dig a trench; that is what you are aiming the question at. The general utility of that bucket is outward digging, and it does not need side clearance. If it goes into a trench, it must absolutely have side clearance, and I would put teeth in it to do it.

Q. You have produced chart 64. Will you get that up so that we can look at it?

Mr. Richey: That is Exhibit No. 73.

Q. Referring to the view in the lower part, the one under the Bernard Clutter device, you have a spring in there at the top of the latch. Is that a compression spring or a tension spring, marked large C? A. C?

Q. Yes. A. That is a compression spring.

Q. That spring would make the latch an automatically closable latch, would it not? A. Yes, sir.

Q. If the spring was not there, it would not close automatically, would it? A. No, sir, not in that position.

Q. Would it, in any position? A. It would, if carefully held up here; as I understand the meaning of your question, no, it would not.

Q. When you say up here, you presume the weight of the lower end would have to be greater than the upper end? A. Yes, sir.

Q. That would be a gravity closure? A. Yes, sir.

Q. That would be a rather unsafe thing to rely upon? A. Yes, sir. In other words, a spring is necessary.

Q. What is the function of rope 9? A. To trip the load and dump the bucket.

Q. I now show you Defendant's Exhibit No. 26, the present-day recollection sketch of some of the witnesses who testified regarding this Joplin machine. Do you find any spring or rope on either one of the holes in the latch you have shown on this chart 64, Exhibit No. 73? A. What do you mean, these two? (Indicating.)

Q. Yes. A. I do not.

Q. You put those on there yourself, did you? A. I did not personally make this sketch.

Q. You do not know what the authority was for putting those things on there, do you? A. No, sir, except it was common practice.

(Narrative continued.) I do not know whether Keith patent 1,315,512 was ever used commercially or not. That patent shows a three line control machine, that is three power lines. Referring now to Hoar patent 1,322,570, I do not know except on hearsay that the machine of that patent was ever used commercially and I presume you do not want hearsay. It is an outward arc machine. Looking at the American Railroad machine the chart with the picture on top, that is an outward arc machine too. The function of the stop out there at the end of the boom I presume that that is to ensure pushing the load out of the bucket in case it sticks; but I do not want to testify absolutely.

The Court: Does the patent indicate what the inventor thought it was for?

Mr. Richey: I think some of the views in the catalog do, Your Honor.

Q. Now of all these patents you have discussed, prior art patents and machines, which would you think is the nearest like the machine of the first Downie patent with respect to operating like that machine and performing its functions?

The Witness: Which ones have I discussed?

Mr. Richey: I think you have a list of them there.

Mr. Corbett: Machines in this question as well as patents?

Mr. Richey: Yes. That includes what you call the Bernard Clutter machine.

The Witness: It includes the Bernard Clutter development?

Mr. Richey: We call it the Bernard Clutter machine, yes.

The Witness: The Bernard Clutter machine is nearest the first Downie patent.

Q. What would be your second choice?

The Witness: Should I discuss Bishop, 1,511,114?

Mr. Richey: Have you not got a list of the ones he discussed, Mr. Mahoney?

Mr. Mahoney: No, we have no list of them.

Q. 15 what? A. 1,511,114.

Mr. Corbett: I do not believe he discussed that Bishop.

Mr. Richey: I have limited it to those you have discussed on the theory that you picked out the best ones to discuss.

Mr. Corbett: Did you have a group of patents you used against that first Downie patent?

The Witness: I did not group them; I indexed them and took them from the index.

Mr. Mahoney: You had better give him a list.

The Witness: There is Robinson, 1,281,379 in connection with Q on chart 33. Is that in the record?

Mr. Richey: You ought to know which ones you discussed; the record shows.

The Court: If he discussed that one, it is likely to be marked as an exhibit.

Mr. Richey: I think so. I have a list of them here.

Mr. Corbett: You had better give him a list.

The Witness: It just happens that I did not make a list of them.

Mr. Richey: I do not want to have to do your clerical work. I gave you a list of Butler, Davy, the three Pugh patents, the Wagner and the Clutter; we have been over those. I asked him about the Keith and Hoar patents; he knows about that. And the alleged Bernard Clutter machine; and he discussed King, 589,565; Howard, 674,417; Boehm, 999,953; Coffey, 745,329; the Robinson, 1,047,991; the Morison patent, I gave you the number of that one; Olson, 826,051; I think that is all—no—Hemme, 1,233,574. That is all we have a record of. I do not think I missed any.

Mr. Corbett: The question is all right; but I think Your Honor ought to understand that they are limited to patents discussed by this expert. Some of them we are going to point out in the argument.

The Court: He is just trying to get this witness' notion of the situation.

Mr. Richey: I think it is pretty fair to assume that the experts discussed the pick.

The Witness: My trouble merely is that I cannot visualize a half a dozen things at once. I did not anticipate this.

Mr. Richey: Maybe you can answer that question after lunch.

The Witness: I could. If that answer is of any importance I prefer to answer it then.

Mr. Richey: Go ahead and answer it now. It will not take you long.

The Court: I will get a drink of water while you are at it.

(Question read.)

The Witness: My second choice would be the Bucyrus bucket on the Clutter machine, in place of the skimmer scoop.

Q. Take any one machine, not build them up; consider the entire disclosure of any of these prior patents you have discussed here. Which would be your second choice? A. I would say I have not discussed any machines near enough to the functions to make that question show what I think. I want an instroke hoe with a drop bottom, a two-line control. I don't think there is any close enough to make a real comparison.

(Narrative continued.) I looked over all the patents or substantially all the patents set up in the answer here and so far as I would know I would say that the ones I have discussed here I consider the most pertinent to the issues of this case. Referring to King patent 589,565, I do not know whether that machine was used commercially. It is an outward arc machine. If you wanted to take the bucket off and change the bucket you would apparently have to take off sixteen bolts.

Referring to the Howard patent 674,417, I do not know whether that was ever used commercially. It is an outward arc machine, I think. I do not know if Boehm patent 999,953 was ever used commercially. I don't know whether Coffey patent 745,329 was ever used commercially, that is licensed under that patent; but dipper sticks built according to Figure 3 have frequently been used commercially. That is an outward arc machine too and as far as I have seen them used they were on an outward arc machine. I do not know the International Contracting Company to whom this patent is assigned. As to Robinson patent 1,047,991, I know that was used commercially by its having been described in the publications of the Engineering societies in articles written by the author. I do not know this of my own knowledge, I never saw the dipper stick. This is an outward arc machine. You say that lots of times they describe these machines in the journals when they are not used, but this article stated where it was used, how it was used, and on what

trench. In the transactions of the engineers they are always used as stated.

Q. You still do not answer my question; you qualify it by reading into your answer what this jo[illegible]l said. I am trying to get at your own opinion of th[illegible]e things. You do know as a matter of fact frequently these journals do illustrate and describe devices that were not used commercially, do you not? A. Yes, sir.

(Narrative continued.) Referring to Olson patent 826,051, I do not know whether that machine was ever used commercially. This machine only uses two power lines during the digging function. The function of the line 14 is to set the boom at different angles as I remember it. Having set the machine at a particular angle, it slides up and down through the collar, I think they call it, 22. The member 14 sets the boom 13 at a definite angle. Looking at Figure 2 and Figure 1, the pivoted part of the bucket is at the end, opposite to the cutting end. That is the part back of the mouth, in other words. The Thew machine which I have discussed here is an outward arc machine. I was present at the tests of both the plaintiff's and defendant's machines. Both of them operated during the digging operation by a two-line control, independently of the swinging and when they dump by inversion they are operated by two lines.

Q. And when they dumped through the bottom, they had a hand-controlled device that was only operated when the bottom was stripped; that is right, is it not; this third line you speak of, the only time they operated that was when they tripped the bottom?

Mr. Corbett: Read the question.

The Court: It is very clear.

The Witness: The third line on the—

The Court: They used a separate line when they wanted to use the drop bottom?

A. Yes, sir, the line wound up by the electric motor.

Q. And the only time they operated that was to trip the bottom after positioning the scoop where they wanted to dump? A. Yes, sir.

The Court: That was true on both devices, was it not?

Mr. Richey: Yes, Your Honor, true on both devices.

(Narrative continued.) Insofar as the dumping and digging are concerned it would matter whether the scoop

was closed at the top or not. That is the top limits the load put on the scoop and the load in the scoop may also stick to the top. It makes a difference in dumping. Putting on the top makes the scoop a good deal stronger. I have named all the distinctions between the scoop with the open top and the open bottom as used on these attachments of the plaintiff and the defendant that occur to me now.

The Court: There was some talk that they do not need a bail.

Mr. Richey: Yes. I was going to ask him about that.

The Court: All right.

Q. The function of the bail is to form a connector between the scoop proper and the ditcher stick? A. Across the open top of the scoop; it is like a handle.

Q. It does not make any difference in the operation of the machine whether that bail—the parallel or horizontal part of that bail is close to the sides of the bucket or removed a little bit away from them. A. Except, if it is on the bucket, it is not a bail.

Q. According to your definition of a bail, it would not be a bail, but, functionally, it is the same, is it not? A. No, sir, it is not functionally the same.

Q. Will you state the differences in the functions of the two? A. Because of the bail across the open top, the load cannot crowd out around the side of the bail.

Q. We are talking about bails, not whether it is closed or not. A. You cannot separate the two; at least I don't know how to.

Q. So that the only difference would be the lower down the bail to the edge of the bucket, the better it confines the load to the bucket? A. The bail does not confine the load to the bucket; the bail lets it out.

Q. What are the functions of this thing I am calling the bail; that is, the part that goes over the top like the handle to a basket, through which the dipper stick is connected to the bucket? A. To transfer the load of the member which is carrying that handle by the middle to the two ends.

Q. And both in the plaintiff's and defendant's machines, that is the function that is performed by these members? A. The bail of the open bucket machine, and the stiffening girder across the top of the closed bucket machine, both perform the function of carrying the load of the ditcher stick over the sides of the ditcher or scoop.

Q. In addition to that, you think that the member in the defendant's devices helps to stiffen the bucket? A. Certainly it does.

Q. That would be another function? A. The prime function.

Q. To a certain extent plaintiff's bail would help to stiffen the bucket? A. No, sir.

Q. You think it would not help to stiffen the bucket at all? A. The sides would be a little harder to crowd out because of the bail. It would help to stiffen the sides of the bucket.

Q. The performance of that function by these two devices is different in degree due to the fact that one is closer to the sides of the bucket than the other? A. In the closed type of bucket, the sides are fully tied together by the top plate itself, and by the angle connections between the top and side plates.

Q. They do not need any assistance from the bail to tie them together? A. They do not use that assistance. The plate does it. The girder across the top, in combination with the plate, makes a carrying member which transfers the strain to the ditcher stick up and down across to the side plates of the bucket.

Q. It seems to me we have come to the point where we are agreed that what you call the bail in plaintiff's machine, and what you call the girder in defendant's machine, both help to bind the sides of the bucket together. I will ask you if the difference in the binding effect is not a matter of degree? Now can you answer that for me? A. I understand this binding effect, to which you allude, to be laterally stiffening the sides of the bucket; and I answer that the bail has no appreciable effect toward laterally binding or stiffening the sides of the bucket, when there is a solid top plate rigidly riveted through the entire length of each side of the bucket embodied in the structure.

Q. Now you say in the defendant's constructions that this girder does not help to bind the sides together because the top does that? A. The top amply does that, yes.

Q. So that the only function of this girder, then, in the defendant's constructions would be to transmit the forces and strains and so on from the stick to the bucket? A. Yes, sir.

Q. And you think in the plaintiff's device, in addition to that function, the bail helps to bind the sides to-

gether? A. Yes, sir, because the bail is the entire connection in that bucket.

Q. I believe you said that in the defendant's constructions, the stick was not connected to the bucket at a point in the rear of the open mouth of the bucket, is that correct? A. Yes, sir, I said it was connected flush with the open mouth of the bucket.

Q. That is, you mean that the edge of the bail or girder is flush with the open mouth of the bucket. A. Yes, sir.

Q. But the connection of the stick to the bail is back of the front edge of it, is it not? A. The connection of the stick to the bucket is as wide as the stick, and the stick is located beginning at the front end of the bucket, because it cannot get any farther forward without running off the bucket.

Q. That is because you say the front end of the stick might be flush with the mouth of the bucket, the stick would not be connected in the rear of the mouth, although the rest of the connection of the stick was in the rear of the mouth? A. Yes, sir, I would say so from any reasonable interpretation. When the stick is connected to the bucket as far toward the mouth as you can get it, without running off into the air, it is connected to the mouth of the bucket.

Q. Would that make any difference in the performance of the functions and operations of these machines, that is, the fact that the front point of the connection of one was flush with the mouth of the bucket, and, in the other, that point was back of the mouth of the bucket? A. By properly modifying the angle between the stick and the bucket, which we are calling the lead angle, either location can be made effective.

Q. In either event if you adjusted it as you mentioned? A. It can be designed.

Q. The operations and functions would be the same? A. Practically the same.

Q. That is, you do not consider that that is any material difference, that little difference in the position of the connection? A. I think equivalent functions can be gotten in either location.

(Narrative continued.) The word "swing" has a meaning peculiar to this industry. I said that the general understanding of the word "swing" originated with one handed shovels, to the best of my knowledge, where the boom is attached to one end of the machine and can-

not swing more than ninety degrees to each side of the center until it strikes the A frame, and some associations of that word "swing" with the reciprocating back and forth motion. I am not prepared to say that the term is not used to express the motion both with the three hundred and sixty degree and the one hundred and eighty degree machines in the patents which have been set up in the answer, because I have not examined it carefully with that in view. I merely say that if anybody said "swing" to me, without any context, I would understand a reciprocating swing rather than a revolving motion. I am also not prepared to say that all people in the industry look upon it in the same way.

Q. Taking up again the combination of machines to meet the first Downie patent as distinguished from the individual machine which we discussed this morning, would you say that the combination of the machine of the Hudson patent and the Pugh patent as illustrated in this Chart 33 that you produced here are the best combination of references to meet the first Downie patent that you know of? A. Well, we already spoke of one—

Q. Well, I mean aside from those? A. Aside from the ones I have mentioned?

Q. Yes. A. Well, at the present, I don't think of any better. I can not remember everything I have seen, but I would say, if that bucket is turned around, rigidly mounted on that stick, it makes a reference very closely.

Q. And that is the only combination that you know of, except these you mentioned this morning? A. The best one that now occurs to me.

Q. I would like it to appear—I understand that this chart 101 is for illustrative purposes—that this channel 7d is on the wrong side of the stick, isn't it? A. It should be toward the mouth of the dipper.

Q. Yes, it is on the wrong side. A. Yes, sir.

Q. You didn't mean this Exhibit 101 as accurate, did you? A. Well, I meant it to be accurate in that sense, so far as that is concerned.

Q. Well, for illustrative purposes? A. It is not an absolutely scale drawing, but I have intended to correctly show the construction of that shovel, and that is accidentally shown on the wrong side.

Q. And the same thing—Chart 102, Exhibit 81, that also appears for illustrative purposes, rather than to be accurate to scale? A. It is not accurate to scale, sir; just approximate.

Mr. Richey: That is all.

RE-DIRECT EXAMINATION by Mr. Corbett.

I left the Bucyrus Company approximately the end of the year 1921. Prior to the year 1921 I saw the door on steam shovels close many times by snapping it shut or by momentum closure. It is ordinary practice. I should say in this type of digging shovel, large revolving shovels working in a ditch, they close the door at least half the time by stopping half way down and snapping it shut and going up again. This closure is a snapping or inertia closing. Not gravity at all, or only partially gravity. I might say that the doors or drop bottoms on shovels for outward dippers, used on outward arc shovels, are generally suspended at a point which makes them close by gravity quite a long distance before the ditcher stick reaches the vertical position. The patent to Robinson illustrates that, although not so well as some others. I refer to Robinson 650,991. Referring to the Exhibit it will be noted that the bottom door is pivoted a long distance up the back, rear side of the dipper; that is to say, the side opposite the side to which the teeth are attached, and that the effect of that is that the center of gravity of the door is so located that the door will close or slam shut long before the dipper stick is brought back to the vertical position; so that open gravity closure occurs when the stick is perhaps thirty feet off the ground and by a little bit of snap you can close it anywhere by the travel very easily.

Q. Now, you spoke of the purposes for which you designed the bucket of the Morrison patent number 1,249,805, and stated that one winning purpose of this bucket was to provide a ready means for dumping into a pit; is that correct? A. No, I don't think that the word "pit" was understood. We speak of the "Pit" as the floor of the excavation, in which the outward arc shovel is standing on the floor of the pit, meaning what is the floor of the material that has been dug away, and when we say, dropping into the pit, that means the shovel dropping on the floor, or the pit man is the man that stands on that floor.

Q. What I want to know is the position in which the stick in this Morrison device was expected to be when you effected this dumping action. A. Well, referring to the chart, the position of the stick would range anywhere from the horizontal ditcher stick position down to the vertical.

Q. You were trying to get a device that would not only dump in a horizontal position, but also would dump when the stick was vertical; is that right? A. Yes. The stick would ordinarily be dumped before it could reach down to the vertical. That is the reason I wanted to find this chart. The bottom of the scoop would be horizontal in the lower dumping position. That is, on the Bucyrus scoop.

Q. Is this the chart that you are looking for? A. Yes, that will do very well. Now, I don't want to be misunderstood on the more or less vertical position of the stick. As mounted on the outward arc shovel, the bottom of the door comes to a horizontal position before the stick has quite dropped down on the vertical. So I prefer the machine or dumping bottom of the door which will dump equally well anywhere from a position where the stick is about horizontal and the dumping bottom of the door is nearly vertical, down to a point where the dumping bottom is fully horizontal.

Q. You were requested to state what changes would have to be made in that Bucyrus bucket shown or illustrated roughly in Chart 100 in order to make it applicable to an instroke machine. I think the question was limited to the digging of trenches. However, was this instroke machine limited to the digging of trenches? A. No, they are frequently used for digging cellars as was done at Joplin.

Q. You suggested that it would be necessary to use side rake teeth to adapt this machine to an instroke machine for the digging of trenches, as I understood. Would that be necessary in the digging of cellars? A. No, you could dig a cellar with the teeth just as shown on the bucket. There would possibly be a little failure to get entirely plumb on the side bank, as there might be a slight interference here. That would be fully removed by putting on teeth there that stick out about an inch further. The large part of a cellar, just scooping it from all directions, this bucket is perfectly adapted as it is.

Q. The Clutter patent indicates that it related to a device for excavating cellars or trenches and in deepening and widening water courses. Would you say that side rake teeth would be necessary in the deepening and widening of water courses? A. No.

Q. How many claims of the Downie patent 1,511,114 involve the feature of side rake teeth. I am speaking about the claims 6 to 9, which are the claims involved in this suit. A. 6 to 9?

Q. 6 to 14, inclusive, which are the ones involved in this suit.

The Court: First Downie patent?

Mr. Corbett: Yes, Your Honor.

A. Patent 1,511,114. Only one claim refers to side rake teeth, claim 14.

Q. In the Bucyrus scoop did any of the teeth serve to protect the pivot on the bottom to any extent? A. Yes, to a considerable extent.

Q. Please designate those teeth on the chart 100. A. By a mark?

Q. By a mark, if necessary. A. (Witness marks on chart.) The teeth 6 projecting at any angle from the two corners of the drop bottom come very closely to the same width across from tooth to tooth with the pair of 6 as the distance across the pivot, but with the length of teeth actually shown and built in the first Downie which was used for the outward arc shovel, that complete protection would refer to comparatively shallow cuts, where the dirt more or less falls away. If you were digging in a trench where the sides stand perfectly parallel, there would be some interference with that tooth shown as cut off.

(Narrative continued.) This chart is designed to show the combination resulting from taking the Bishop structure or patent 1,511,114, the result of combining that with the Bucyrus bucket, in place of the rigid and dumping bucket shown in the patent. I don't know what purpose Downie had in making his bucket open at the top. I can see the purposes that might be accomplished by it. In the first place, it is lighter, takes less metal to make it, and is cheaper to make. In the matter of enclosure of the dirt the Downie bucket only encloses the dirt on three sides, whereas the defendant's bucket enclosed it on five sides. The defendant's bucket is more of a flare type of bucket—I cannot—I am not accurately able to answer that. I might say further, in regard to the effect of having a fully enclosed bucket—there has been a good deal said about the adherence of material in dumping sticky material to the sides of the bucket. It would be quite plausible to leave the top off the bucket so the material would not adhere to it, and it would go out more easily. That might be another purpose of having the open top.

I have read the deposition of Bernard Clutter and the several corroborative depositions taken in connection with the Bernard Clutter development.

Q. I refer you to Defendant's Exhibit No. 26, and ask you if these depositions disclose that the structure used by Bernard Clutter contained any other features than the features shown in this blue print?

Mr. Richey: Well, I object to that. He is interpreting or trying to interpret the depositions themselves to what the reference says. Somebody said that this was the machine, and someone vacillated a little bit, and some of them said it was essentially the same thing. Now, how can this man come along and take their testimony and interpret it and state what they meant.

Mr. Corbett: This is to illustrate to the Court what the device was.

Mr. Richey: No, explain the machine, not the testimony.

The Court: What is the purpose of this testimony?

Mr. Corbett: Well, it was left in the air as to whether or not there was a spring on that latch, in the cross examination. I just want to clear that up, Your Honor.

Mr. Richey: The Joplin witnesses were handed that drawing and asked, is this the machine. Now, it was up to them to say whether it was or not, and not for this witness to say what they did say.

The Court: Unless he seen the machine—have you ever seen this machine?

The Witness: I never saw the machine, no. The depositions take a certain scoop as a substitute.

Mr. Richey: Now, wait a minute; let the Court rule upon it.

The Court: If these depositions say that there was a spring there in addition, all he has to do is to point that out, it seems to me.

Mr. Corbett: All right; we will point that out.

Q. In the plaintiff's bucket with the open top and with the bail there is a chance, is there not, that root and similar things might hang on that bail in dumping? A. Yes, that is correct.

Mr. Corbett: That is all, Your Honor.

The Court: Anything further, Mr. Richey?

Re-Cross Examination by Mr. Richey.

Q. This chart 100 which you have discussed—what is the Bishop, the number of the Bishop patent you refer to on that. Didn't you mean the Hudson patent?

Mr. Corbett: He means the Hudson.

Mr. Richey: Yes, that is what I thought.

The Court: You mean the word up there? (Referring to chart 100.)

Mr. Richey: Should be Hudson. That is right, isn't it? Look at the Hudson patent and see if that is not right.

Mr. Corbett: Yes, that is what it should be.

The Witness: It appears to be Hudson 1,281,379.

Mr. Richey: Well, if you'll put that in evidence, that will change it. That is all I have.

Mr. Corbett: I would like to have it there clearly that the patent referred to is the Hudson patent, number 1,281,379, which is shown on chart 100. The word "Bishop" was in error.

Mr. Richey: I have one more question.

Q. You said something about a snapping closure of the back of these buckets on the forward arc machines. Do you consider that one shown in the Robinson patent, 659,991, typical of the type of bucket that is used for that purpose? A. It is. Yes, I would say typical. There are other designs, many of them, in which the pivot is carried further forward toward the tooth side of the bucket, which makes it close still sooner. The location of the pivot is a matter of design, and it is practically always located so as to close before the dipper stick gets down.

Q. Of all the forward arc buckets you have discussed here, you consider that one shown in the Robinson patent best available for closing the back by snapping it? A. I don't know whether I could find one which appeals to me more.

Q. Well, pick out the best one, will you—the one you consider the most suitable for that purpose. A. Well, the Robinson will do. I will let it go at that. The other two that I find have the teething in no better location.

Mr. Richey: That is all.

Mr. Mahoney: We wish to offer this chart 100 in evidence as Defendant's Exhibit number 92.

Mr. Williams: We now offer in evidence the second deposition of BERNARD R. CLUTTER, taken October 21, 1930.

Mr. May: We should like to have the purpose stated in connection with this offer.

Mr. Williams: In this deposition there is some evidence upon the structure of the scoop used, a page or two on that, and the rest of it goes mainly to the development by Clutter at Joplin, Missouri, and the arrangements that were made between Clutter and the plaintiff here, through R. R. Downie, as we claim, for the suppression of the evidence on that development at Joplin.

Those are the contents, and the various purposes for which it may be heard, goes to the weight of Downie's testimony, goes to the question of the probability of the development by Clutter as testified to by other witnesses and also goes to the question of the equitable propriety of the bringing of this dispute, in view of the attempted suppression of this evidence.

Mr. May: As to all purposes but the last, we have no objection to its admission, and will not object. But as to the last, we feel that the practices of a court of equity will not allow that construction to be put on this kind of evidence. We can cite some cases.

The Court: Well now, what is the one that you object to?

Mr. May: It is the last, that it may be used on coming in with unclean hands, as it is stated, to support that. On that we can cite the Court some principles.

The Court: All right, I will hear you. Is there anything else on that same issue, Mr. Williams?

Mr. Williams: There is also a stack of papers, various papers and correspondence, which were brought into the court by the plaintiff in response to a motion to produce, and we will ask the introduction of a number of those papers that were not identified in this deposition. This deposition identifies, and carries with it, I think, three of the letters, and on cross examination a number of others were marked for identification but not introduced by the plaintiff, the deposition having been taken by the defendant. Then there are some papers in addition to those mentioned in the deposition itself which, as I say, have been produced here in response to a motion, which we will offer in evidence.

The Court: All right.

Mr. May: As far as what is to be offered is concerned, I think we will not have much trouble. As to the effect of the giving of the testimony that is offered, that is the only question that I wished to raise with the Court.

The Court: Your objection to the testimony is to the effect of it after it is in?

Mr. May: The effect of it after it is in.

The Court: Well, then it is admissible, on your own statement of it.

Mr. May: No; testimony can be admissible for one purpose and not for another.

The Court: Well, of course, that is so, but your objection is to what the Court shall do with the testimony after it comes in, so that, by the form of the objection, admits the admissibility of it.

Mr. May: I can put my objection in another form. I object to the testimony, then, for the purpose of tending to prove anything as to unclean hands in the coming into this court.

The Court: All right, I will hear you on that.

Mr. May: As I understand the principles as applied by the Court, where it is a question involving fraud or suppression of fabricated testimony, it is applied only as to the weight to be given to that testimony. In other words, if a case can be proven by the person seeking redress by testimony in spite of what may have been suppressed, or by testimony other than may have been fabricated, the policy of the law still is to allow him to recover. And that is shown, I think, in two cases which I can cite, one is in 280 Fed. 895, *Armstrong vs. Pauling Brothers Company*, which is a case in equity for an accounting for profits. An order had been made upon the company to produce certain records. Instead of producing these records, the party destroyed them, and the Court, in its opinion, says, where the defendant on an accounting for profits refuses to produce its records in compliance with the orders of the Master and the Court and destroys records which might contain material evidence, the other party is entitled to introduce the best evidence available, and even though it is imperfect, vague and uncertain, the presumption ought to be made as against the defendant.

The Court: It will be presumed that the documents were damaging to the party that destroyed them.

Mr. May: Exactly. We have no objection to this testimony, if that is the purpose of it.

Another case is *Barnes vs. Barnes*, 282 Illinois, 597, also 4 *A. L. R.*, p. 4, on p. 8.

He who comes into a court of equity must come with clean hands, and one who does iniquity cannot have

equity; but that maxim is limited in its application to where the substance of the thing is inequitable, and the iniquity must apply to the particular subject matter. It is not sufficient to bar relief that the inequitable conduct should be laid to the proof of some item or fact and where the origin of the claim is not inequitable.

Now, that is the principle we stand on here. The origin of our claim is not inequitable. (Continues reading from opinion in case last cited.)

Now, I have a citation from *Chamberlain on Modern Evidence*, edition of 1911, volume 1, section 478, which is found on page 614. (Reads)

Now, in this case, we think that principle applies so far as the admission of this evidence is concerned, and then we say that the evidence is here before the Court; the Court is not being deprived of any of the facts which it is entitled to have before it. But this offer as made of this deposition and other documents, that Mr. Williams mentioned, cannot be properly admissible for the purpose of proving or showing that the plaintiff has come in with unclean hands. As I said to the Court, we do not object that they are offered for the purpose of allowing what inferences may be fully and logically drawn therefrom, just as any other inferences by conduct are allowed to be drawn.

Mr. Williams: May it please Your Honor, we are offering this evidence for all purposes, not only as a basis for inference as to the weight of testimony already in this record. We are offering it also as evidence of facts about which there is no testimony or evidence in this record at all. And it comes squarely within the authorities cited by counsel, in that the facts which we propose here to disclose go to the very basis of this claim. Our claim is that if the facts were known first when Rex Downie applied for his patent, he would not have gotten it.

The Court: That is the first Downie patent.

Mr. Williams: That is the first Downie patent. And second, that if the facts were known in the Cleveland case, he would not have had relief certainly as to that party, and my claim is as to any relief in that suit.

So that the evidence which we are here seeking to introduce is evidence of conduct which goes to the very basis of the suit, of the claim made here in this suit. It appears in one of the authorities cited that if there is a spoliation of documents, that at least there will be an

inference against the spoliator. True, we claim that inference here.

Now, he quotes a further section from *Chamberlain* to the effect that if the offending party is entitled to relief, he is not barred by inequitable conduct. Now, our claim is first that upon the full showing of these facts, the plaintiff is not entitled to relief, and second that if those facts when detailed do not absolutely bar him from relief, as we claim they do, still they may be used for all the inferences about which he speaks.

Now, it seems to me, therefore, that without citation of authorities, though I have plenty of authority I can cite upon the general situation that evidence of this character will bar relief, but if it be not of such character or not of such extent, or does not go deep enough to the basis or root of the action to actually bar relief—

The Court: It is probably too collateral to this lawsuit to be a basis of unclean hands.

Mr. Williams: In this case?

The Court: Yes.

Mr. Williams: Why, no, Your Honor, it is at the very basis of it.

The Court: It is collateral in this case, and if there was any fraud perpetrated, it was on the Cleveland Court in that litigation.

Mr. Williams: Oh, no—Wait a minute. These acts were committed before that case was brought. Now it may have been that the Byers case was first in contemplation but it certainly cannot be contended that this plaintiff should sue nobody but Byers, and that no other defendant would be less affected.

The Court: My understanding is that the thing you are complaining about is that this evidence was not brought to the attention of the Cleveland Court.

Mr. Williams: Not only that, but it was suppressed so it could not get there. If they had been successful in their attempt, it would not appear there.

Mr. May: We think there is a large assumption there. There is no evidence whatever on that.

The Court: Well I think I will have to take the evidence, perhaps not on the theory that you suggest, but we will leave that open for argument.

Mr. Williams: Well, so Your Honor will not get this with a closed mind, so to speak—

The Court: Well, my mind doesn't close for a long time.

Mr. Williams: Well, at least the inclination is to set it aside from the main part. This is not a flank attack; this is a frontal attack.

The Court: That has to be considered; I have not seen the evidence, of course. We all know the rule that unclean hands cannot be alleged as mere collateral matter, and then bar relief. But the reason I think this evidence is admissible perhaps—and I will not decide that until I have considered the case—is this: that strong reliance is going to be placed upon the decision of the Court of Appeals in the Cleveland case. Now it seems to me that I have got to take any evidence which I should ponder on to determine whether or not the Cleveland Court would have come to a different conclusion than it did, if it had had that before it. Now this may be of that caliber. I do not know what place this will have in this record, but I think I ought to admit it, and then argue it later.

Mr. Williams: Well, let me make one more statement.

The Court: Well, I might rule against you after you make the statement. I am for you now.

Mr. Williams: Well, maybe I had better not talk any more.

Mr. May: There is no evidence in this case that the defendants in the Byers case had not these facts.

The Court: Well, that is so. That is up to you. I don't know whether that is in here or not. I cannot judge as to that. It seems to me that the thing to do is to let it in on any theory, and then you gentlemen may argue the effect of it later. That is all I can do.

Mr. Williams: The deposition is offered in evidence, and I will now read a part of it, and the part that I do not read will be taken as read, as I understand, for the purpose of this case.

The Court: Yes.

DEPOSITION FOR DEFENDANTS
Taken at Lakewood, New Jersey.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that the Defendant herein will take the testimony of Bernard R. Clutter, 17 Edgewood Court, Lakewood, New Jersey, who resides more than one hundred (100) miles from the place of trial herein, for use on behalf of the Defendant at the final hearing of this cause, before Helen R. Grove, a Notary Public in and for the County of Ocean, New Jersey, who is not of counsel nor interested in this cause, at the office of Helen R. Grove, 138 Ocean Avenue, Lakewood, New Jersey, on the 21st day of October, 1930, at seven o'clock P. M., and thereafter from day to day as the taking of the depositions may be adjourned; and such testimony will be taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated at Columbus, Ohio, this 16th day of October, 1930.

Service of a copy of the above notice of taking testimony is hereby acknowledged this 17th day of October, 1930.

RICHEY & WATTS,
Attorneys for Plaintiff.

PRINTER'S NOTE:

A like notice was issued on behalf of the General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Helen R. Grove, 138 Ocean Avenue, Lakewood, New Jersey, a Notary Public, in and for the County of Ocean, New Jersey, commencing at seven o'clock P. M. on the 21st day of October, 1930. Counsel for all parties being present.

BERNARD R. CLUTTER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Bernard R. Clutter. I reside at 17 Edgewood Court, Lakewood, New Jersey. I am occupied with road construction, being superintendent of The Liddle & Pfeiffer Co., of Perth Amboy, N. J. I have been working on road construction work this year. I am just completing a seven mile, approximately, piece of road of concrete. I have full charge of this road construction work. I am 49 years of age this year. I am testifying under subpoenas in these cases. I have forgot the date, but I am the Bernard R. Clutter who testified in these cases at Lakewood, New Jersey, regarding the designing, construction and use of a rigidly attached drop bottom ditcher scoop on an instroke ditching machine for Wallower Brothers on the Joplin Supply Company job at Joplin, Missouri, in the early part of the year 1920. In my previous deposition in these cases I testified that several years prior to the time I designed and used the drop bottom ditcher scoop for Wallower Brothers at Joplin, Missouri, I had been employed by the Keystone Driller Company, plaintiff in these cases, as demonstrator of machines and salesman.

While I was employed by the Keystone Driller Company that company manufactured and sold excavators having ditching attachments, like that shown in figure 1 of the drawing of Defendants' Exhibit No. 24. These machines manufactured and sold by the Keystone Driller Company had a link member, 19, connected at one end of the ditcher stick 1 and at the point 19a, and at the other end of the supporting member 17. The Keystone Driller Company manufactured this link member 19 straight and flat for some time. This link, however, was later changed in shape to avoid an interference across the end of the boom extension straps. The point

where the link member 19 contacted with the boom extension strap is indicated on figure 1 of Defendants' Exhibit 24 with the letter "B". I have demonstrated Keystone machines having ditcher attachments like that shown in figure 1 of Defendants' Exhibit 24. This interference of part 19 with the boom extension strap affected the inner movement of the ditcher stick 1 towards the boom by causing a stoppage of the instroke of the ditcher stick when pulled up near the boom.

Q. I now hand you Defendant's Exhibit No. 34, a tracing made from Clutter patent 1,317,431, Defendant's Exhibit No. 24 and ask you if this tracing shows the manner in which link 19 contacted with the boom on the machines you demonstrated for Keystone, having straight links 19 thereon.

Mr. Edgerton: The question is objected to as leading, moreover the illustration handed the witness has not been proven as a faithful representation of the drawing to which it is alleged to refer.

Mr. Mahoney: The witness's attention is called to the fact that the tracing is enlarged twice the size of the drawing of Defendant's Exhibit 24, and modified somewhat to the extent that certain parts shown in the defendant's exhibit and not in question here have been eliminated in the tracing. A. Yes, sir.

(Narrative continued.) The part marked P 2805 on blue print of Keystone Driller Company number P 48 Defendants' Exhibit 35 is the connecting link, and the figure P 2805 on this blue print corresponds to the part 19 on Defendants' Exhibit 24.

Keystone catalogue bulletin No. 901 dated January 1917, Defendants' Exhibit 36, page 7, figure 708, shows where the connecting link 19 interferes with the extension strap at B. The figure 708 in this catalogue represents the Keystone excavator number 3. Machines like those illustrated on page 7, figure 708, Defendant's Exhibit 36 having straight links number 19 thereon, were manufactured and sold by the Keystone Driller Company to my personal knowledge prior to January, 1917, and prior to that I don't know how far back.

In my previous deposition I testified that I went to the Island of Trinidad, near the South American mainland some time in the year 1920 with a Keystone Driller Company excavator and I returned to the United States about the year 1921. After I returned to the United

States I located at Hillside, New Jersey. I have been a resident of New Jersey since returning to the United States in 1921. I have principally been engaged in road construction work since returning to the United States from Trinidad in the year 1921.

I am acquainted with Robert Rex Downie, an officer of the Keystone Driller Company, plaintiff in these cases, and became acquainted with him at Beaver Falls, Pennsylvania, approximately in the year 1914. He is generally called "Rex".

I have seen Mr. Rex Downie since I returned from Trinidad in 1921. The first occasion that I saw him after I returned to the United States in 1921 was approximately the early part of 1925. This meeting took place at my residence 17 Edgewood Court, Lakewood, New Jersey. Mr. Howard Elmire was also present at that meeting. He is one of the salesmen of the Keystone Driller Company. This visit of Mr. Downie to Lakewood to see me was a voluntary one on Mr. Downie's part. When he first came there I did not know what he came to see me about. He asked me to go on the outside of the house to talk over some private business. Mr. Elmire stayed in the house. When we went out into the yard there was no one present besides Mr. Downie and I.

Q. Relate as nearly as you can what took place when you and Mr. Downie went out into the yard of your home at Lakewood on this occasion. A. Mr. Downie informed me that he wanted to talk over some business privately and that he didn't want anyone to know anything about it except he and I. I asked him what the nature of the business was and he said it was regarding that drop bottom ditcher scoop that I had had made out at Joplin, Missouri. He explained that they, meaning the Keystone Co., I presume, or possibly he, Rex Downie, had a patent, I should have said had taken out a patent on a drop bottom ditcher scoop, and that I apparently had made or had had made the first one at Joplin, Missouri, and that I could cooperate with them in the protection of this patent. I told Rex that if I had had the first one made and put into use, that it was my invention, and not theirs, and that I could not see where they had any right to the patent. I don't remember all that was said, however after considerable jarring, over the proposition, Rex informed me that I did not have money to go into court and fight the Keystone Driller Company, which was a fact. However, he said if there had been a

wrong done, let's get together and see if we can right the wrong. I asked him in what way that could be accomplished. He said that he had a proposition to make me if I could be willing to consider it, and I asked him what it was. He said that they would sell me a new machine at half price. As this was the only opportunity that I felt that I had, to realize off of my invention, I agreed to accept it. I asked Rex if we should go into the house and draw up a contract to that effect, and he said, "No, not now." He said "Now that is the ticklish part of this thing.", That it was a question as to whether or not there could be anything drawn up in writing that would be of any advantage. He also said that any papers to show that there was a deal existing between us might serve to invalidate the patent. He said that he would find out if there was any way that they could hold me and see me later. He also told me that I would have to sign settlement in full for the machine, and that they could later issue me a credit for the half interest, and that I would have to trust entirely to his honesty to carry out their part of the deal. He asked me not to say anything to Elmire or anyone else as to what his business was down in Lakewood.

Q. In your answer to the above question, you testified that Downie said that you could cooperate with them in the protection of this patent. Did he explain to you what you were to do in this respect? A. Yes, sir.

Q. How were you to cooperate with him in the protection of the patent? A. By keeping absolutely quiet in regards to my part of the invention.

Q. And for that consideration they were to give you a half interest in a new Keystone excavator. Is that right? A. Yes, sir. That is for that consideration and also as he expressed it to right the wrong if there had been a wrong done.

Q. What was the full price of a Keystone excavator that he promised to give you a half interest in? A. Including the attachments $8200.00 and I believe it was $40.00 or $50.00 or approximately that figure.

Q. Then you were to receive the sum of approximately $4120.00 as your half interest in that machine. Is that correct? A. That is correct.

Q. In this conversation you have just testified to with Mr. Rex Downie did he explain or mention to you how he was going to protect the patent, or what the occasion was for asking you to cooperate with him in the pro-

tection of this patent? A. He said that they had either started or were going to start a suit or suits on company or companies that were infringing.

Q. In your answer to Q. 44 you said that you were to keep absolutely quiet in regard to your part of the invention. What part did that refer to? A. The scoop that I had made at Joplin, Missouri.

Q. You say you accepted Mr. Downie's proposition in this respect? A. Yes, sir.

Q. Did you order a Keystone excavator then according to this proposition? A. Verbally—the contract was not written at that time.

Q. Did the Keystone Driller Co. later ship you a machine on this verbal order or in accordance with the proposition made to you by Mr. Downie? A. My recollection is that the contract and notes were signed prior to the shipment of the machine, but the verbal agreement between Rex Downie and myself was to be carried out as part of the contract—however not in writing.

Q. Do you recall whether or not the contract and notes and chattel mortgages and other papers for the purchase of this machine were made out for the full price of the machine? A. Yes, they were.

Q. I now hand you a letter with attachments and ask you to explain what they are if you know. A. This letter is to inform me that the machine in question is shipped or was shipped on the 9th day of March, 1925, and consigned to Clutter Contracting Co. at Lanoka Harbor, N. J. This letter is from R. J. Bole, manager, New York branch, dated March 16th, 1925. The attachments are the invoice covering the machine as ordered with attachments, also bill of lading memorandum.

Q. This letter is from the Keystone Driller Co. New York office. Is that correct? A. Yes, sir.

Q. Who was the Clutter Contracting Co. to whom this letter, the bill of lading and the invoice are addressed to? A. B. R. Clutter, trading as Clutter Contracting Co.

Q. Was this Keystone excavator Model 4 invoiced to you on March 9th, 1925, the excavator that was shipped to you in accordance with the deal between you and Mr. Rex Downie at Lakewood in the early part of the year 1925, about which you have just testified, and the machine in which you were to have a one-half interest free?

Mr. Edgerton: Objected to as leading.

A. It was.

Q. Is the $8240.00 the total amount of the invoice the full price of the machine and attachments? A. Yes, sir.

Q. Did you actually receive the machine referred to in the Keystone Driller letter of March 16th, 1925, invoice dated March 9, 1925, and bill of lading receipted for by the Penna. Railroad at Beaver Falls on March 12th, 1925? A. Yes, I received the machine. I never did receive all of the attachments.

Q. Referring to the invoice dated March 9th, 1925, can you state which of the attachments listed thereon you received and which you did not receive. A. I received the five-eighth yard six roll skimmer scoop. The balance of attachments were shipped later to the Arlington shop, but I did not get them.

Q. The first item on the invoice, however, "model 4 '25 Front Crawler Mounting Gasoline Driven Keystone Traction Excavator", refers to the excavator proper, and this you did receive? A. Yes, sir.

Q. This Keystone letter dated March 16th, 1925, and the attached invoice dated March 9th, 1925, and the memorandum bill of lading dated March 9th, 1925, were received by you in due course through the mail. Is that correct? A. Yes, sir.

Mr. Mahoney: The letter from the Keystone Driller Co., 170 Broadway, New York, dated March 16th, 1925, addressed to the Clutter Contracting Co., Edgewood Court, Lakewood, N. J., and the Keystone Driller Co. invoice, attached thereto, dated March 9th, 1925, and the attached bill of lading from the Keystone Driller Company to the Clutter Contracting Company dated March 9th, 1925, are hereby offered in evidence as one exhibit and the Notary is requested to mark the same Defendant's Exhibit No. 37, "Keystone Driller Letter, March 16th, 1925, and attached invoice and bill of lading."

Mr. Edgerton: The exhibit in its joint and several parts is objected to as immaterial, irrelevant and insufficiently proven.

Q. In your answer to Q. 42 you said that Mr. Downie stated "that he would find out if there was any way they could hold me and see me later." Did he later see you and bring you any papers to sign with reference to this statement that he made? A. Yes, he did.

Q. When was this done? A. My recollection is that it was some time prior to the shipment of the machine.

Q. Where were these papers brought to for you to sign? A. To my residence, 17 Edgewood Court, Lakewood, N. J.

Q. Was anyone present besides you and Mr. Downie on this occasion? A. Yes, sir.

Q. Who was present on this occasion? A. I don't remember who the gentleman was but it was a man that Rex brought with him.

Q. Do you recall the nature of these papers that were brought to you on Mr. Downie's second visit to Lakewood? A. Not except that when they started to write the papers up Rex said that they were going to try to tie me hand and foot if such a thing was possible.

Q. Did you have an opportunity to read these papers? A. Not to my recollection.

Q. Were you furnished a copy of any of the papers that they required you to sign on this occasion? A. I was not.

Q. Did you request a copy? A. Yes, I did.

Q. What did Mr. Downie say? A. He said that they couldn't have any copies out, and that it was a question as to whether they could ever use the papers they had or not.

Q. These papers were separate from the mortgage and notes which you had separately signed for the purchase of the machine which he had promised you a half interest in. Is that correct?

Mr. Edgerton: Objected to as leading.

A. Yes, sir.

Q. These papers which you say you were not furnished a copy of, to what did you understand they related, or what was the purpose of having you sign them? A. So that I could not interfere with them in their protection of the patent on the drop bottom ditcher scoop.

Q. By whom do you refer to as "them" in your previous answer? A. Rex Downie or the Keystone Driller Co.

Q. Did you ever subsequently purchase a second Keystone Excavator from the Keystone Driller Co.? A. Yes, sir.

Q. Was this an outright purchase? That is the second machine. A. Yes, sir.

Q. Were both of these Keystone excavators used by you in your business after you received them? A. Yes, sir.

Q. Do you recall the names of any of the companies that you were working for after you received the Keystone machines? A. Yes, sir. The Michael Staub Company of Pitman, N. J.

Q. What kind of work were you doing for this company? A. Sub-contracting on road building.

(Narrative continued.) The amount of this subcontract money for that company in that year in accordance with my recollection was a little over $140,000.00. I only got paid for part of my work for Michael Staub Company. I do not recall how much was left unpaid, as Mr. Staub and I did not have a settlement. The reason for our not having a settlement is that we had purchased together a tract of land known as Cedar Cove on Barnegat Bay for a consideration of $55,000. The property was purchased in Mr. Staub's name with the understanding that we would incorporate a company and that when we had our settlement the amount that I was paying down would be credited to me. We had our corporation papers being made out by Vice Chancellor Berry of Toms River, N. J. On account of illness the Vice Chancellor was compelled or did go to Florida for his health. This delayed the taking out of the corporation. Just shortly after the Vice Chancellor returned from the South, Mr. Peter Staub, manager for the Michael Staub Company, died. As I had had no settlement with the Staub Company, and as the property was in Mr. Staub's name I could not claim any interest therein. The Staub estate was considered to be solvent, however, the relatives to settle up the estate informed me that there was nothing left.

Q. Did you see any attorneys to find out whether you could recover from the Peter Staub estate what was due you?

Mr. Edgerton: This line of questioning is objected to as obviously no materiality to the issues in these cases from the foregoing questions and answers.

Mr. Mahoney: Its materiality will appear later.

A. My recollection is that I did talk it over with an attorney.

Q. What did he advise you? A. I forget—he wanted me to put up some money in advance. I don't remember how much, but I know I didn't have enough at that time.

Q. In other words, you never received any money that was due you from the Michael Staub Company. A. No, nor any settlement with them. That is—no final settlement. I received some money on the work.

Q. What relation did the Michael Staub Company have to Peter Staub? A. Peter Staub did all the business to my knowledge for the Michael Staub Company, but traded as Michael Staub Company.

Q. Do you recall the names of any other companies that you did work for after you received these Keystone machines in the year 1925? A. For the Jar Construction Company.

Q. What kind of work did you do for the Jar Construction Company? A. Sub-contracting on road construction. Grading.

Q. Did this company pay you for the work you did for them? A. Part of the pay roll only. They went bankrupt.

Q. Did they owe you money when they went into bankruptcy. A. Yes, sir.

Q. How did these financial losses affect the payments you had to make on the machines that you purchased from the Keystone Driller Co., one of which machines you purchased outright, the other machine of which you were given a half interest in, according with the proposition that was made to you by Downie in the early part of 1925. A. I was not getting the money out of my work and therefore could not raise the money to pay the Keystone Driller Co.

(Adjournment taken at the point in the deposition session until 1:00 P. M. October 22nd, 1930.)

(October 22, 1930, 1:00 P. M. deposition session resumed.)

(Narrative continued.) I made some payments on the machine to the Keystone Driller Company. The Keystone Driller Company finally took these two machines back, including the one in which they gave me the half interest. Before these machines were taken away from me I had a discussion with Rex Downie of the Keystone Driller Company. This meeting with Rex Downie relative to the re-possession of these machines was had on the road that we were constructing near Roseland, New Jersey. Rex came out to see me on the road that we were working on in New Jersey and that is where the discussion took place. Besides Mr. Downie my recollec-

tion is that Howard Elmire was with him. I don't remember whether Mr. Elmire was present during the discussion I had with Mr. Downie.

Q. Will you relate as nearly as you can the conversation you had with Mr. Rex Downie on this occasion near Roseland, N. J.? A. Rex informed me that they would have to take the machine back unless I could raise the money immediately, or a portion of it. I informed him that if he took the machine away from me that it meant that I would lose anything that I might realize from the patent on the drop bottom ditcher scoop, and that if he did take the machine away that it was not going to do him any good. He said that he did not want me to feel that way about it, and I informed him that those were the facts and he could take it or leave it, and that eventually I could pay him every cent that I owed the company for that machine. He then offered to substitute a cash proposition instead of the credit proposition that I was formerly to have on the machine. His proposition was that they pay me half the amount of the anticipated credit in cash. The question then arose as to what I owed the Keystone Driller Co. on parts. In this discussion I explained to Rex the enormous amount of the parts bill or for parts that I had paid for for machines that were new in 1925, and during this discussion Rex agreed to give me a 50% discount on the parts bill that I owed the company. After the parts bill had been adjusted, the question arose as to a credit on the attachments that I had purchased with the machine and were shipped to the Arlington shop, and not lifted by me. This apparently was news to Rex. However, he thought that he should allow me only half the original cost of the parts as I had not lifted them or paid for them. This was also agreed upon.

Q. You state that he offered you a cash proposition instead of the credit proposition. Will you explain more fully what you mean by this? A. He said that the company was complaining very much or words to that effect about some notes that were overdue, and that if I would let them take the machine back, and substitute the cash proposition for half the amount, that I was to receive on the credit proposition.

Q. By credit proposition do you mean the proposition that Rex made to you in the early part of 1925 at Lakewood agreeing to give you a half interest in a Keystone excavator in consideration of your keeping quiet

about the development you made on the drop bottom instroke scoop at Joplin, Missouri?

Mr. Edgerton: Objected to as leading.

A. I do.

Q. The cash proposition then was to be a substitute for the credit proposition that was made to you at Lakewood in 1925? A. It was.

Q. Was the amount of the cash consideration they were to give you as a substitute for the machine credit mentioned at Roseland in your conversation with Mr. Downie? A. It was gone into and estimated that it would amount to around $2000.00, and after it was totalled up the deduction on the parts and credits for the attachments at Arlington that I was to have from the Keystone Driller Co. on the machine amounted to $3808.00. Therefore the cash proposition amounted to $1904.00.

Q. And you agreed to accept this cash consideration in lieu of the machine credit which had been granted to you on the machine you purchased from the Keystone Driller Co. in the year 1925? A. I did.

Q. What year was it that the Keystone Driller Company took the machine back? A. 1927.

Q. Was that the same year that Rex had the discussion at Roseland, N. J. about which you have just been testifying? A. It was.

Q. In your answer to Q. 104 you stated that you told Rex Downie when he said he was going to take the machines away from you that it was not going to do him any good. What did you mean by this statement? A. I meant that if I did not profit from the invention that I did not expect him to.

Q. Did he understand what you meant there? A. Evidently he did, for then he offered to substitute the cash proposition instead of the credit proposition.

Q. Do you know whether there were any suits pending at that time which were brought by the Keystone Driller Co. on their Downie patent on the drop bottom scoop? A. My understanding was that there was a suit pending between the Keystone Driller Co. and the Byers Machine Co.

Mr. Edgerton: Objected to as hearsay.

Q. In consideration then of the $1904.00 that was agreed to be paid to you by the Keystone Driller Co. you were to remain silent and not disclose to anyone during

the pendency of any infringement suits brought or to be brought by the Keystone Driller Co. against infringers your development and use of the drop bottom ditcher scoop which you had made and used at Joplin, Missouri, during the early part of 1920. Is that correct?

Mr. Edgerton: The question is objected to as improper. It assumes unsupported statements made by this witness and is further objected to as leading.

A. That is my recollection.

Q. Did the Keystone Driller Co. ever pay you the $1904.00 cash consideration that they agreed to give you at Roseland, N. J.? A. A part of it.

Q. What part did you receive? A. My recollection is $476.00.

Q. How was this amount paid to you—in cash, or otherwise? A. By check.

Q. Was the check made out and signed by the Keystone Driller Co.? A. I believe it was.

Q. Did you cash the check? A. I did.

Q. What became of the other part of this $1904.00 that was agreed to be paid to you? Or how was the amount of $476.00 arrived at after you had been agreed the sum of $1904.00? A. Rex apparently had forgotten that we had cut the $3808.00 in two to arrive at the $1904.00 which was in accordance with our agreement, and cut the $1904.00 in two to $952.00 and then cut the $952.00 in two to $476.00, and I was unable to show him or prove to his satisfaction, apparently, as to what our verbal agreement was.

Q. Do you recall when the Keystone Driller Co. gave you the check for $476.00? A. No, I do not.

Q. It was some time subsequent to the year 1927? Is that correct? A. Yes.

Q. After the Keystone Driller Co. had agreed to pay you the amount of $1904.00 and then kept cutting the amount in half from time to time, did you write them any letters about the matter? A. I did.

Q. Did you receive any letters in reply from the Keystone Driller Co.? A. I did.

Q. I now hand you what purports to be an original letter of two sheets and ask you to state what it is, the letter being dated November 23, 1928. A. It's an answer to one of the letters that I wrote to Rex Downie trying to explain to him and make him understand what our verbal agreement was at the time that he took the machine back.

Q. From whom was this letter received? A. From Rex Downie.

Q. What is the signature on the letter?

Mr. Edgerton: The question is objected. The letter speaks for itself.

A. Rex Downie.

Q. What is the name above Rex Downie's signature?

Mr. Edgerton: Same objection.

A. Keystone Driller Co.

Q. The letter is addressed to you at 17 Edgewood Court, Lakewood, N. J. Is it not? A. Yes, sir.

Q. Was this letter received by you in due course through the mail in reply to a letter you mailed to the Keystone Driller Co. about this matter? A. Yes, sir.

Mr. Mahoney: The Keystone Driller Company's letter dated November 23, 1928, addressed to Mr. Burn Clutter, 17 Edgewood Court, Lakewood, N. J., and signed by the Keystone Driller Co. by Rex Downie is hereby offered in evidence and the Notary is requested to mark the same "Defendant's Exhibit No. 38, Keystone Driller Co. letter to Mr. Burn Clutter dated November 23, 1928."

Q. The word "Burn" on this letter is an abbreviation of your first name Bernard. Is that correct? A. Yes, sir.

Q. Will you kindly read this letter into the record.

Mr. Edgerton: Objected to. The letter speaks for itself and there is no occasion for pursuing this course.

(Witness reads letter)

A.

KEYSTONE DRILLER COMPANY
Makers of
Well Drills, Excavators, Well Pumps
Beaver Falls, Pennsylvania

November 23, 1928.

Mr. Burn Clutter,
17 Edgewood Court,
Lakewood, N. J.

Dear Burn:

We have your letter of November 15th and are glad to see that you are still able to argue fluently. Writer has referred to our letter of February 16th with which

we enclosed check for $476.00 and by the receipt of which you indicated your satisfaction with the amount of $952.00 as the contingent cash credit substituted for the original machine credit,—which in turn went astray because of our having to take the machine back.

Now the other half of the contingent cash credit was not to become payable until and unless our case should be satisfactorily decided by the end of 1928. No decision has been made as yet. The case drags for various reasons. If your parts account had been in good shape writer would have no difficulty in securing general approval of these cash remittances, but the fact is the accounting department is being held out of a substantial parts bill which amounts to more than the contingent credit which you still have and which will become due in case the case is settled in accordance with our original deal by the end of 1928.

This leaves the writer nothing to do except point out that you owe us more than we would owe you even if the case were settled,—and that the case is not in fact settled. Hence we cannot say that we feel that there is anything due you under these circumstances.

Writer is sorry that we cannot do any better, but feels that we have no reason to actually exceed the spirit of the deal as made. (Instead we will sell you another machine some day, or Mr. Elmire and I will come down and bum another shore dinner the next time we are in Jersey, and we will stick Elmire for the smokes.)

Yours truly,

KEYSTONE DRILLER COMPANY.

RRD:FB (Signed) REX DOWNIE.

Q. Referring to the second paragraph of the Keystone letter of November 23, 1928, Defendant's Exhibit No. 38, do you know what case is referred to? A. My understanding is that it is the case between the Keystone Driller Co. and the Byers Company.

Q. That was the case brought by the Keystone Driller Co. against the Byers Company for alleged infringement of Downie patents?

Mr. Edgerton: Objected to as leading.

A. That was the understanding that I had.

Q. In the first paragraph of the letter dated November 23, 1928, Defendant's Exhibit No. 38, it is stated that

on February 16th the Keystone Driller Co. inclosed check to you for $476.00. Does that refer to the check which you have previously testified to having received instead of the $1904.00 cash amount that was promised to you at Roseland, N. J.? A. It does.

Q. I now hand you what purports to be an original letter dated December 4th, 1928, consisting of three sheets, and ask you to state what it is. A. It is an answer to my letter apparently of November 28th, trying to tell me that they don't owe me any money.

Q. From whom was the letter received? A. Keystone Driller Co.—Rex Downie.

Q. And it is addressed to you at 17 Edgewood Court, Lakewood, N. J.? A. Yes, sir.

Q. To what transaction does this letter refer? A. To the cash proposition which substituted the original credit proposition.

Q. That is, to the deal that was made between you and Rex Downie of the Keystone Driller Co. and to which you have previously testified in this deposition. Is that correct? A. That is right.

Q. Was this letter received by you in due course through the mail in reply to the letter dated November 28th, which you sent to the Keystone Driller Co.? A. It was.

Mr. Mahoney: The Keystone Driller Co. letter dated December 4th, 1928, addressed to Mr. Burn R. Clutter, 17 Edgewood Court, Lakewood, N. J., consisting of three sheets and signed Keystone Driller Co. by Rex Downie, is hereby offered in evidence and the Notary is requested to mark the same "Defendant's Exhibit No. 39, Keystone Driller Co. letter to Mr. Burn R. Clutter, dated December 4th, 1928."

Mr. Edgerton: The Exhibit 39 as well as the letter, Exhibit 38, is objected to as not being accompanied by the letters to which they purport to be answers.

Q. The originals of your letters were of course sent to the Keystone Driller Co. and are not now in your possession. Is that correct? A. It is.

Q. Will you kindly read the Defendant's Exhibit No. 39 into the record?

Mr. Edgerton: Objection is repeated that the letter speaks for itself and objection is made to reading the letter into the record.

A.

KEYSTONE DRILLER COMPANY
Makers of
Well Drills Excavators Well Pumps
Beaver Falls, Pennsylvania

December 4, 1928

Mr. Burn R. Clutter,
17 Edgewood Court,
Lakewood, N. J.

Dear Burn:

We have your remonstrance of November 28th and of course have read same carefully.

In trying to find out how or why we could have gotten so far apart in our ideas, after we thought the matter was so carefully arranged to avoid misunderstandings, etc., writer has carefully gone back over the correspondence and memorandum of agreement, and we think we have the explanation of the misunderstanding.

Here is a verbatim copy of Paragraph 4 of the agreement.

"It is agreed that the payment of one-fourth of the price of the machine and equipment named in second paragraph shall be suspended only until two years from date hereof, in anticipation of the possible occurrence of one of the contingencies named in the third paragraph, and that if at that time none of the contingencies named shall have occurred then the third paragraph hereof shall definitely lapse and the suspended one-fourth part of the price shall at once become due and payable in money."

We never thought that this paragraph could be misunderstood, as meaning anything else than that the second quarter of the price of the machine could be held up by you for two years from the date of the deal on the chance that one of the three contingencies named in the third paragraph might occur and that if, by the end of two years not one of the above contingencies had occurred, then that second quarter of the price of the machine should be paid by you in money forthwith. We used the plain language "then the third paragraph hereof shall definitely lapse"; this cannot mean anything except that we could not wait any longer for the favorable settlement of the suit,—which was to be the reason for our issuing you the second quarter of credit.

Now possibly you read this fourth paragraph (after having forgotten our verbal explanation and repetition

of it) as meaning that *we* should pay *you* a quarter part of the price of the machine in money, but the third paragraph, it seems to us, is very clear on the point that the Company was only to hold the offer open for two years, —"subject to the time limit contained in fourth paragraph hereof"—.

Then of course we extended the time within which the contingencies might occur with effect until the end of 1928,—this by our letter of February 16th, 1928; but in the offer to so extend the time we also required substitution of $952.00 as the amount of the contingent credit instead of the original $1904.00 representing the second or contingent quarter of the price of the machine,—this in view of the fact that the machine had been re-possessed, and that therefore any consideration given by the Company under the provisions of third paragraph of the agreement would have to be a cash consideration instead of a credit against merchandise. The deal was really fulfilled, and the Company not required, under it, to do *anything* more, on April 11th, 1927,—that is two years from the date of the deal. By that time you had been given the primary and certain consideration of a quarter interest in the machine, and you had used up this quarter interest in wear and tear of the machine. We did not take back the machine until after its value had dropped considerably below the amount we had against it after crediting you with the amount you had paid in case, and the amount of the first credit of $1904.00. So we take it that there is no possibility of your referring to the first quarter. And we have endeavored above to set right any misunderstanding there might have been in regard to the second quarter.

The status of the affair at this point is that if any-one of the three contingencies involved occurs before the end of 1928 there will be a payment of $476.00 due you from the Company; but your failure to have paid your account out causes Mr. Smith to object to the payment of this final amount even if it *should* become due, as it is common practice to offset one debt against another.

We trust that the above will clear the matter up, as we would regret having you dissatisfied in regard to fulfillment of the deal.

We are

Yours truly,

KEYSTONE DRILLER COMPANY.

RRD:FB (Signed) Rex Downie.

Q. I now hand you what purports to be an original letter dated December 17, 1928, and ask you to state what it is. A. It relates to the contracts or arrangements between the Keystone Driller Co. or Rex Downie and myself in regard to the drop bottom ditcher scoop that I designed at Joplin, Missouri.

Q. From whom was the letter received? A. Rex Downie of the Keystone Driller Co.

Q. And it is addressed to you at 17 Edgewood Court, Lakewood, N. J.? A. That is correct.

Q. Was this letter received by you in due course through the mail in reply to a letter which you mailed to the Keystone Driller Co.? A. In accordance with my recollection it was.

Mr. Mahoney: The Keystone Driller Co.'s letter just identified by the witness dated December 17th, 1928, addressed to Mr. Burn R. Clutter, 17 Edgewood Court, Lakewood, N. J., and signed Keystone Driller Co., by Rex Downie, is hereby offered in evidence, and the Notary is requested to mark the same "Defendant's Exhibit No. 40, Keystone Driller Co.'s letter to Burn R. Clutter, dated December 17, 1928."

Mr. Edgerton: The exhibit is objected to as not being accompanied by the letter to which it purports to be an answer.

Q. Do you have the original letter to which Defendant's Exhibit No. 40 is a reply? A. I don't believe I have.

Q. Defendant's Exhibit No. 40 makes reference to the fact that you signed an affidavit. Was this one of the papers that Mr. Downie brought down to Lakewood for you to sign so as to tie you hand and foot as he expressed it? A. Evidently it was.

Q. When did you first discover that one of the papers you signed at Lakewood on that occasion was an affidavit?

Mr. Edgerton: The question is objected to as leading.

A. When Mr. Downie was leaving he said "There was an affidavit in these papers that you signed."

Q. Do you recall having been sworn to any affidavit at that time? A. I do not.

Q. The first you knew, then, that there was an affidavit in the papers was when he went out the door and

made that statement that you have just referred to. Is that correct? A. That is my recollection.

Q. Will you kindly read Defendant's Exhibit No. 40 into the record?

Mr. Edgerton: Same objection as before.

A. (Witness reads letter).

KEYSTONE DRILLER COMPANY
Makers of
Well Drills Excavators Well Pumps
Beaver Falls, Pennsylvania

December 17, 1928

Mr. Burn R. Clutter
17 Edgewood Court,
Lakewood, N. J.

Dear Burn:

Of course we do not like to have you call us all these hard names, but we do not see that we can do anything about it. At least the writer knows of nothing more to say beyond what is said in our letter of December 4th. We made a contract with you, and we believe that that contract has been or is being correctly and properly discharged. The consideration from you to us was that you conveyed to us whatever possible undetermined rights you might have or might come to have arising out of your Joplin experiment; also as a part of the consideration, you made affidavit as to the abandonment of that experiment. The only circumstance which has arisen and which was not anticipated or provided for in our written deal was that even with the benefit of the $1904.00 credit you were not able to pay out on the machine, and hence that you have nothing at the present time to evidence the credit rendered as the first and certain portion of the consideration from the Company to you. However, our check for $476.00 dated on or about February 16, 1928, evidences the mutual agreement to substitute the $952.00 cash consideration for the original $1904.00 merchandise-credit consideration. The payment of that check represents a going beyond our obligation.

Yours truly,

KEYSTONE DRILLER COMPANY,

RRD:FB (Signed) REX DOWNIE.

Direct examination closed.

Mr. Edgerton: Without waiving the right of cross examination, the entire testimony of this witness is objected to as this witness has previously testified in these cases, and as the defendants have no right to take depositions a second time for the same witness.

Mr. Mahoney: In reply to objection just made by counsel for plaintiff, counsel for defendant wishes to state that it is well settled law that the deposition of the same witness may be taken the second time under United States Revised Statute 863, 864 and 865 under which this deposition was taken.

CROSS EXAMINATION by Mr. Edgerton.

Q. Now, Mr. Clutter, in these altercations between yourself and Mr. Downie the balance or credits you alleged that were due you became quite extended argument, did they not? A. They did.

Q. And it was over quite a period of time. Was it not? A. It was.

Q. And the friendly relations between yourself and Mr. Downie, or Rex, became altered or strained, did they not? A. It certainly did cause some feeling, for there was no question on my part but what Rex Downie had not carried out his part of the verbal cash agreement arrived at at or near Roseland, N. J.

Q. But you didn't feel this animus until Mr. Downie finally refused to pay the sum you alleged that was due you? A. No, not to any great extent.

Q. Now you have testified that your first negotiations with Mr. Downie were made privately and that no one else was present. Is that correct? A. That is correct?

Mr. Mahoney: Objected to on the ground that the question does not give the date of the negotiations referred to, or the place where the negotiations took place.

Q. I refer to the meeting in Lakewood at your home in the early part of 1925. Do you wish to change your answer? A. It is my recollection it was in the early spring of 1925 or winter. I do not care to change the answer.

Q. I now hand you what purports to be a copy of a letter written by you on February 6, 1928, to Mr. Rex Downie and ask you if you can identify this letter in substance as one you wrote to Mr. Downie.

Mr. Mahoney: Objection is made to the above question on the ground that the paper being submitted to the

witness is admittedly not the original letter which it is claimed that the witness wrote, and therefore the witness has no means of knowing whether or not the letter is the one which he is alleged to have written. The witness is entitled to the production of the original letter which it is claimed he wrote, under the rules of evidence, before he is required to answer.

Mr. Edgerton: The original of the letter will be produced in due course and this witness has only been asked to identify the copy as to substance. It is believed therefore that the question is proper subject to verification when counsel is able to produce the original letter.

Mr. Mahoney: My objection is insisted upon.

(Recess taken in deposition session until 7:30 P. M. October 22nd, 1930.)

(After recess deposition session resumed.)

Mr. Edgerton: Inasmuch as the original letter referred to in XQ. 161 has been sent for the witness will not be asked to make response until said letter is received.

Q. You have testified that Mr. Downie asked you to sign an agreement some time in 1925, and that the agreement related to the purchase of a Keystone excavator on which there were alleged credits. You also testified that you had no opportunity to read this agreement. Is that correct? A. That is my recollection.

Q. Do you remember whether you signed this agreement or not? A. I signed some papers, but I do not remember what they were.

Q. Do you usually sign papers without reading them? A. Not ordinarily.

Q. But you think you did this time? A. That is my recollection.

Q. Then if you didn't read the agreement, you would be unable to identify the same now, would you not? A. I understand what the substance and purpose of the agreement was intended for, and believe that I could identify it.

Q. Well, disregarding what you thought the purpose of the agreement was, how can you state what the substance of the agreement actually signed by you was at that time? A. The substance of the agreement was to sell to the Keystone Driller Co. the invention or design of the drop bottom ditcher scoop that I had gotten up at Joplin, Missouri. It was either to sell to the Keystone

Driller Co. or to Rex Downie—I don't remember which one.

Q. Now this happened about five years ago, and apart from the letters that you referred to in your testimony today, you are testifying entirely from memory. Are you not? A. I am.

Q. Moreover, if as you say, you didn't read the agreement, there might have been other matters in this agreement which you have now forgotten. Is that correct?

Mr. Mahoney: This line of cross examination is objected to on the ground that the questions are related to a written instrument and the witness is not required to answer any questions regarding the written instrument unless and until the written instrument is first produced and he has identified it and given an opportunity to inspect it, to ascertain if it is the instrument which he signed.

Mr. Edgerton: This witness has testified at great length regarding this transaction, and it is believed, therefore, that this line of cross examination is proper to test the witness's memory.

A. There may have been.

Q. Now the affidavit to which you have previously referred, what is your recollection as to when this instrument was signed?

Mr. Mahoney: Same objection as XQ. 169.

A. My recollection is that all the papers that were signed were signed all at the same time in regard to this agreement.

Q. You don't remember of having subscribed to the affidavit before a Notary. Is that right?

Mr. Mahoney: Same objection as XQ. 169.

A. There was a man with Rex Downie at this time; as to whether or not he was a Notary, I do not remember.

Q. Did he or did he not administer an oath when you signed the papers? A. Not to my recollection.

Q. I now hand you a paper entitled "statement" dated April 16th, 1925, and ask you whether this is your signature. A. It looks like my signature.

Q. Do you identify that affidavit as the one to which you have previously referred to in direct examination? A. This is possibly the one.

Q. Well, is it or is it not? A. This is the affidavit in question.

Mr. Edgerton: It is requested the affidavit just referred to be marked by the Notary for identification as "Plaintiff's Exhibit A."

Q. In your answer to Q. 34 where you referred to your meeting with Mr. Downie at your residence, did Mr. Downie tell you the details of the structure for which he had made application for patent? A. He did partially acquaint me with the details at the time that the argument took place in regard to his or their taking out a patent on the principles of my design. However, the full details were not gone into.

Q. Are you sure that Mr. Elmire was not present at this meeting, that is, the meeting which you have alleged took place outside of your home? A. Absolutely, sure. I was instructed by Mr. Downie to say nothing to Elmire in regard to the purpose of his visit.

Q. Why didn't you apply for a patent on the device you experimented with in Joplin?

Mr. Reed: The question is objected to as outside of the direct examination. The direct examination was limited to the agreement and collateral matters, and it had nothing to do with the making of the drop bottom scoop, which was covered in a former deposition by this witness.

Mr. Edgerton: It is believed that this question is entirely proper. By reference to Q. 10 and subsequent questions in this deposition taken at this hearing reference has been made to the Joplin excavating job.

A. Because I was informed by Mr. Oliver at that time manger of the Joplin branch, of the Keystone Driller Co., that Rex Downie had gotten up a drop bottom ditcher scoop and was taking out or had taken out a patent, and that that office was not aware of that fact.

Q. So you never saw a patent attorney or attempted to do anything further after that, towards securing a patent?

Mr. Reed: Same objection.

A. No, at that time I believed that Mr. Oliver was telling me the truth.

Q. And you didn't do anything towards securing a patent after your interview with Mr. Downie to which you have recently referred, that is, the interview at Lakewood in the early part of 1925? A. No. I did not.

Q. Have you a bill of lading or the bill of lading for the second Keystone excavator you received? A. I have the memorandum of the bill of lading.

Q. Can you produce the same? A. Yes, sir.

(Witness produces bill of lading)

Q. Was the Clutter Contracting Co. a partnership? A. It was intended to be at the time that I started trading as Clutter Contracting Co.

Q. Was it in March, 1925? A. No, it was not a partnership at that time, in fact it never did become a partnership.

(Adjournment was taken at this point in the deposition session until 1:30 P. M., October 23, 1930.)

(October 23, 1930, 1:30 P. M., deposition session resumed.)

Q. I hand you a letter dated November 13, 1928, and ask you to state whether you can identify this letter as one having been written by yourself to Mr. Downie. A. Yes, sir.

Q. I call your attention to the date 11-13-28, and the pencil notation above the 11—you did not make this correction, did you? A. I did not.

Mr. Edgerton: The Notary is requested to mark the letter just identified by the witness as "Plaintiff's Exhibit B" for the purpose of identification.

Q. I now hand you a letter dated November 15, 1928, and ask if you can identify this letter as one having been written by yourself to Mr. Rex Downie. A. Yes, I think that was my letter.

Q. Can't you make a more definite statement. Is this not in your handwriting? A. Yes, sir, I believe it is. There is evidently a mistake in the date of one of the letters, but there is no question in my mind that it is my letter.

Mr. Edgerton: The Notary is requested to mark for purposes of identification the letter just identified by the witness as "Plaintiff's Exhibit C."

Q. I now hand you a letter dated November 28, 1928, and ask you if you can identify this letter as one having been written by yourself to Mr. Rex Downie. A. That is right.

Q. I call your attention to some penciled memorandum on the face of this letter. These notations were not placed there by yourself, were they? A. No, sir.

Mr. Edgerton: The Notary is requested to mark for purposes of identification the letter just identified by the witness as "Plaintiff's Exhibit D."

Q. I now hand you a letter dated January 9, 1928, directed to Mr. Rex Downie, and a carbon copy of a letter dated January 18, 1928, which is appended thereto, and ask you whether you can identify the letter written in longhand as one written by yourself to Mr. Downie. A. This is my letter.

Q. I call your attention to certain pencil notations appearing on the face and the back of page 1 of the letter. These notations were not placed there by yourself, were they? A. They were not.

Mr. Edgerton: The Notary is requested to mark for purposes of identification the letter of January 9, 1928, just identified by the witness as "Plaintiff's Exhibit E."

Q. I now call your attention to the carbon copy of the letter attached to your letter of January 9, 1928, this letter being dated January 18, 1928, and directed to B. R. Clutter, Lakewood, N. J., signed by Keystone Driller Co., initialled R.R.D./B.F. in the lower left-hand corner. Can you identify this letter as a copy of one received by you from Keystone Driller Co. or Mr. R. R. Downie?

Mr. Mahoney: Will counsel for Plaintiff please state on the record if the carbon copy referred to is the carbon of the original letter purported to have been sent to the witness, and made at the time contemporaneously with the original letter.

Mr. Edgerton: It is my understanding that it is.

A. I believe that I did receive that letter.

Mr. Edgerton: The Notary is requested to mark for purposes of identification the letter just identified by the witness as "Plaintiff's Exhibit F."

Q. I now hand you a letter dated February 6, 1928, directed to Mr. Rex Downie, and ask you to state whether you can identify this letter as one having been written by yourself to Mr. Downie. A. Yes, sir.

Mr. Edgerton: Notary is requested to mark for purposes of identification the letter just identified by the witness as "Plaintiff's Exhibit G."

Q. I now hand you a carbon copy of a letter dated February 16, 1928, directed to Burn R. Clutter, signed by Keystone Driller Co., initialled RRD.FB, and ask you to state whether or not you can identify this carbon copy as a copy of a letter received by you from Keystone Driller Co. or Mr. Downie.

Mr. Mahoney: Counsel is requested to state if this carbon copy was made simultaneously with the writing of the original letter.

Mr. Edgerton: It is my understanding that it is.

A. My recollection of the letter received with the check for $476.00 was that it was a one-page letter, nevertheless I may be mistaken in this matter, and this may be a true copy.

Q. Do you remember receiving a letter in reply to yours of February 6, 1928, and which was in substance the same as the letter just handed you?

Mr. Mahoney: Objected to on the ground that the witness has stated that he has not been able to positively identify this letter as having been received, therefore cannot be further questioned along this line.

A. I do not remember the exact date that I received the letter enclosing check, nor the entire substance of same. However, the letter that I received in substance was somewhat similar.

Mr. Edgerton: The Notary is requested to mark the letter of February 16, 1928, directed to Mr. Burn R. Clutter and of which the witness has just testified, for purposes of identification, "Plaintiff's Exhibit H."

Q. I now hand you a copy of a memorandum which purports to be an agreement between Burn R. Clutter and the Keystone Driller Co., and ask you if you can identify this instrument as a copy of the agreement to which you have previously testified to as being entered into between yourself and Mr. Downie in the early part of 1925.

Mr. Mahoney: The above question is objected to on the ground that the paper handed the witness is not the original and is unsigned and undated, and therefore makes it impossible for the witness to determine whether or not he ever signed such a paper nor has the absence of the original purported agreement been explained or excused in any manner, and in the absence of the original it is impossible for the witness to identify the paper referred to.

A. The memorandum is not true in detail, and as the writer did not read the papers that he signed, it is impossible for me to identify this memorandum.

Q. If you didn't read the memorandum, how do you know it is not true in detail? A. Because I have just

now read the memorandum, which speaks of myself and Herbert Wallower having this arrangement built in a shop at Pittsburgh, Kansas, and tried out in Joplin, Missouri, as the scoop was actually built in the Keystone shops by the Keystone Co. at Joplin, Missouri.

Q. Do I understand you then to deny that you signed an agreement of which this is a copy?

Mr. Reed: The witness having stated that not having read the papers at the time they were signed by him, he cannot possibly identify this as one of the papers signed, it is obvious that the question is improper, and is therefore objected to.

Mr. Edgerton: The witness has previously stated that he was able to identify this agreement.

A. If in my previous statement I have said that I could identify the agreement, I meant only by my signature, and as this memorandum is unsigned, I am unable to identify it.

Mr. Edgerton: The paper last referred to by the witness, to wit, copy of memorandum agreement between Burn R. Clutter and the Keystone Driller Co. is now handed the Notary with the request that the same be marked for purposes of identification as "Plaintiff's Exhibit I."

Mr. Mahoney: Counsel for defendant wants it to be clearly understood that the papers which you have marked for identification as Plaintiff's Exhibits A to I inclusive are not now being offered in evidence. Is that correct?

Mr. Edgerton: Yes.

Q. Did you not make repeated efforts after receipt of the letter, Defendant's Exhibit 40, which apparently is the last correspondence between yourself and Mr. Downie, to secure payment of your alleged claim against Mr. Downie or the Keystone Driller Co.? A. My efforts to collect the balance of the money that I felt was justly due me from the Keystone Driller Co. were to the best of my recollection by correspondence.

Q. And you didn't talk to Mr. Downie or anyone else after your correspondence ceased, endeavoring to make further settlement of the claim? A. Well, I am not sure whether I did or not.

Q. Do you remember of talking to Mr. Lysle Hazen about this matter? A. Yes, sir, I do.

Q. Do you remember what you told him at St. Louis in the early part of 1929? A. No, I do not.

Q. Did Mr. Downie or the Keystone Driller Co. pay you any money after February 16, 1928, as indicated in the letter identified as "Plaintiff's Exhibit H." A. No, not after that.

Q. Did you talk to Mr. Wagner or Mr. B. C. Clutter about this matter prior to April 12, 1929? A. I don't remember the date but I talked to them regarding the drop bottom ditcher scoop.

Q. Did you ask either of them to see Mr. Downie or anyone in the Keystone Driller Co. regarding this matter?

Mr. Mahoney: Objected to on the ground that the question does not state the date and place at which the alleged conversation is to have taken place.

A. My recollection is that they asked me to permit them to see the Keystone Driller Co. and see if there could not be some kind of an arrangement made whereby the actual facts in regard to the invention of this scoop would not come out at that time.

Q. Do you know whether or not either Mr. Wagner or Mr. B. C. Clutter saw Mr. Downie or the Keystone Co. regarding the questions they asked you and as referred to in your answer XQ. 206? A. My recollection is that they either saw the Keystone Driller Company or some of their officials or phoned them. However, to my knowledge, there were no arrangements made between the two companies.

Cross examination closed.

RE-DIRECT EXAMINATION by Mr. Mahoney.

Mr. Mahoney: The Keystone bill of lading dated July 14, 1925, consigned to the Clutter Contracting Co., Tuckerton, N. J., produced by the witness in answer to XQ. 182 is hereby offered in evidence as "Defendant's Exhibit 41" and the Notary is requested to mark the same "Keystone bill of lading dated July 14, 1925, to Clutter Contracting Co. of Tuckerton, N. J."

Q. Who is B. C. Clutter referred to in XQ. 205? A. My brother.

Q. Do you know what company Mr. Wagner and Mr. B. C. Clutter are connected with or employed by? A. Star Drilling Machine Co. of Akron, Ohio.

Q. Did you have anything to do with the preparation of the papers which have been marked for identifica-

tion as "Plaintiff's Exhibit A"? A. This was prepared I believe by Rex Downie for the purpose, as he related it, of tying me hand and foot. I am sure these were the words used. I don't think I had anything to do with the preparation of the papers.

Q. Did you retain or make copies of the papers which have been identified as "Plaintiff's Exhibits B, C, D, E and G which you identified as letters which you wrote to the Keystone Driller Co. or Rex Downie? A. No, I did not make copies.

Q. Did you preserve the original of the letter marked for identification as "Plaintiff's Exhibit F" after it was received by you? A. I don't know whether I did or not.

Q. In answer to XQ. 205, you stated that Mr. Wagner and Mr. B. C. Clutter asked you to permit them to see the Keystone Co. to see if there could not be some kind of an arrangement made whereby the actual facts in regard to the invention of this scoop would not come out at that time. Did Mr. Wagner and Mr. B. C. Clutter of the Star Drilling Co. know that you had invented the drop bottom scoop? A. They did.

Q. Had the Star Drilling Co. been threatened with suits for infringement by the Keystone Co. on the Downie drop bottom patent at that time?

Mr. Edgerton: The question is objected to as the answer would be based on hearsay.

A. My understanding is that they had been warned by the Keystone Driller Co.

Mr. Edgerton: Objected to as hearsay.

Q. Then it is your understanding as stated in your answer to XQ. 207 that Mr. Wagner and Mr. B. C. Clutter had a meeting with the Keystone Driller Co. after they had been warned of infringement. Is that correct? A. My understanding is that they were in conversation with them in an interview or by telephone regarding that matter.

Q. The Star Drilling Company were never sued for infringement. Is that correct?

Mr. Edgerton: Same objection as before.

A. I do not know.

Q. You have never heard that The Star Drilling Co. were sued for infringement, have you? A. I have not.

Re-Direct examination closed.

Deposition closed.

(Certificate of Notary omitted.)

The Court: What was the claimed date of the first Downie patent?

Mr. Williams: He filed his application on January 27, 1921; I will give you the chronology of the events. The work in Joplin was in December, 1919, and January and February, 1920. Downie, as I got it from some affidavits in the case, conceived his invention some time after that, he says.

The Court: Well, does he say that in his papers?

Mr. Williams: No, not in these papers. It is in the affidavit on the motion to produce in this case.

The Court: What does he say in that affidavit to be the date of it?

Mr. Williams: He doesn't say. He conceived his invention after the work at Joplin, and then he filed his application June 27, 1921, and the patent was issued October 7, 1924, No. 1,511,114. Then, I might as well give you these dates as I go along—then on December 22, 1926, the Byers bill was filed. I might say first, however, that the Downie patent was issued in 1924, and then this first settlement, where he was to get this credit on the machine, etc. was made in or around April, 1925. So to get now, the work was in 1920, the Joplin work, Downie's conception, his claimed conception, some time after that, and then some time after that again he heard of the Joplin work, and then after that, to-wit, June 27, 1921, he filed the application for the first Downie patent, and it was issued October 7, 1924. Then this settlement with Downie, or between Downie and Clutter, occurred around in February, March and April, that they had their talks, of 1925, and then the Byers suit was brought in December of 1926, and then in 1927 the machines were repossessed and the cash consideration substituted and the Byers trial was held before Judge Westenhaver in September, 1927, and then in 1928 comes along some correspondence and testimony which I will now come to between Downie and Clutter, as to what all these things were about and what they really had been.

Downie says in the affidavit which was filed in this case on this motion, that he invented the excavating machine disclosed in that patent prior to learning anything

about the machine or the experiment at Joplin. I don't know what the date was, but that is the only information I have on that subject.

Then Defendant's Exhibit 38 was identified as a letter from Downie to Clutter, and in that letter there was a reference made to some case. The letter was dated November 23, 1928, and he said he understood that it referred to the Byers case.

The Court: It had not been brought at that time, however.

Mr. Williams: Yes, the Byers case was brought, Your Honor, in December, 1926.

The Court: Oh, I didn't get the right date out of the depositions. What was the date in the deposition that you just read, I mean the date of that letter?

Mr. Williams: The date of the letter was in 1928, November 23, 1928.

And then he identifies a couple of other letters, one of December 4, and I shall read the letter when I get them in the proper sequence, and then he identifies another letter to him from Downie, Exhibit 40, of September 17.

The Court: Is this the deposition which was referred to when there occurred the occasion on which exhibits were handed up to this witness and identified, and then withdrawn?

Mr. Williams: Yes, that comes in the cross-examination. These three or four letters were letters that Clutter had in his possession, sent to him by Downie, and they were identified, or read into the record, and then when it came to the cross-examination, plaintiff's counsel had a lot of the other letters, to which we shall presently refer, identified by the witness and marked, but he did not introduce them. And then subsequently the wrangle came—

The Court: Whether you should have had copies?

Mr. Williams: Yes.

Mr. Mahoney: We had two depositions. The first wrangle that Your Honor refers to occurred during the taking of the first deposition. They submitted some kind of a paper, and would not let us read it, and later on in this deposition they submitted some more papers.

The Court: That happened in both cases?

Mr. Mahoney: Yes.

Mr. Williams: In both cases. Now this Exhibit 40, that is one of the letters that he identified, which make a reference to the fact that he signed an affidavit.

The Court: Does that finish the depositions?

Mr. Williams: Just one more supporting deposition, Your Honor, and this is the deposition of Frederick W. Ransom. I will read a portion of that deposition. The deposition as a whole is now offered in evidence.

DEPOSITION FOR THE DEFENDANTS

Taken at Akron, Ohio.

NOTICE OF TAKING TESTIMONY.

Mr. Philip E. Siggers,
918 F Street, N. W.,
Washington, D. C.

Messrs. Richey & Watts,
1090 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of Frederick W. Ransom, 103 Victor Avenue, Cuyahoga Falls, Ohio, who resides more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Mary McGowan, a Notary Public in and for the County of Summit, Ohio, who is not of counsel nor interested in this cause, at the office of Mary McGowan, Room 215, Ohio Building, Akron, Ohio, on the 24th day of October, 1930, at ten o'clock A.M., and thereafter from day to day as the taking of the depositions may be adjourned; and such testimony will be taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

Edwin P. Corbett.

Dated at Columbus, Ohio, this 18 day of October, 1930.

Service of a copy of the above notice of taking testimony is hereby acknowledged this 20 day of October, 1930.

Richey & Watts,
Attorneys for Plaintiff.

PRINTER'S NOTE:

A like notice was issued on behalf of the General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Mary E. McGowan, Notary Public, 215 Ohio Building, Akron, Ohio, commencing at ten o'clock A.M. on the 24th day of October, 1930. Counsel for all parties being present.

FREDERICK W. RANSOM, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Frederick W. Ransom. I reside at 103 Victor Avenue, Cuyahoga Falls, Ohio. I am retired at present. I will be fifty-eight November 27th this year. I am testifying under subpoenas in these cases. I was formerly employed by the Keystone Driller Company of Beaver Falls, Pa. I began work at the Keystone Driller Co. as bookkeeper in 1894 and was advanced as Assistant General Manager, Treasurer, and General Sales Manager. Was then transferred to New York office, in 1923 and was in charge of accounts as Credit Manager and in charge of sales in the Export Department. I left the employ of the Keystone Driller Company March 1, 1927. I am acquainted with Bernard R. Clutter who was formerly employed by the Keystone Driller Company. I recall that I was in Joplin, Missouri, on business for the Keystone Driller Company two or three times a year after the Keystone opened their shops at that place. I think that the Keystone opened their shops in Joplin about 1913. I recall being in Joplin at the time when the Joplin Supply Company's excavation was being done. I saw the excavation being done at the site where the Joplin Supply Company building was being erected. The Keystone excavator was being used to excavate the basement on this job. The operator was Bernard R. Clutter.

Q. Your answer to question 7, you have stated that you were transferred by the Keystone Driller Co. to their New York office in the year 1923 and had charge of accounts as Credit Manager at that point. While you were Credit Manager at the New York office, subsequent

to the year 1923, do you recall whether or not the Keystone Driller Co. had any account with Bernard R. Clutter at that time living in New Jersey?

Mr. Edgerton: Objected to as leading.

A. Yes.

Q. Do you recall what these accounts were for?

Mr. Edgerton: Same objection.

A. For the purchase of two excavators and supplies and parts.

Q. Did you ever have occasion to press Mr. Clutter for a collection of these accounts?

Mr. Edgerton: Same objection.

A. Yes, Mr. Clutter was almost always in arrears on his payments as specified by contract; on which he purchased the excavators.

Q. Do you remember at any time Mr. Clutter questioning or disputing the amounts which you claimed were due on these machines, for any reason?

Mr. Edgerton: Objection is again made to this line of examination, because it is leading and this objection stands without repetition for any following examination of this order.

A. Mr. Clutter never questioned our account except that he claimed he had a credit due him which we did not have on our books and repeatedly stated that Rex Downie knew about this credit that should be given him on his account.

Q. Would he explain to you in any way the nature of the credit claimed was due him? A. He did not.

Q. He just kept telling you to ask Rex Downie about it? A. Yes.

Q. Did you subsequently take up with Mr. Rex Downie, the matter of these credits claimed by Bernard R. Clutter on the two excavators you say he had purchased from the Keystone Driller Company about which you have been testifying? A. Yes.

Q. Will you kindly relate where and when you took the matter up with Mr. Rex Downie and state as nearly as you can just exactly what took place? A. In the early part of December of 1926 I had occasion to go to Beaver Falls in connection with an agency to be established in Cuba for the account of sales of Keystone excavators, and at the same time to go over with the Treasurer Mr. Smith a number of accounts in New York

territory, among these the account of Bernard R. Clutter. I stated to Mr. Smith, Clutter's reason for withholding payments on his account and asked him if he knew anything about the credits claimed by Clutter, stating that Clutter always claimed that Rex Downie could clear up the matter. He then called in Mr. Rex Downie on this account. Mr. Downie seemed surprised that no credit had been allowed and said that he had given Mr. Smith a memorandum on the matter. Mr. Smith then found a memorandum which called for a credit, I believe of $1000.00 and said that he had not made the credit on the books, because he understood the credit was not to be made until a suit then pending was decided. Mr. Downie said, no, that one half the credit I believe $500.00 was to be made immediately and the balance was to be allowed in case of a favorable decision on this case. It was then decided that the credit was to be made for the 1/2 the amount and that I was to so notify Clutter and insist on payments of his account. I am not sure how this credit was entered on the books but believe it was through my original entry through credit memorandum book from the New York office. This would be early in December 1926.

Q. Did Mr. Smith or Mr. Downie explain to you at that time just why Clutter was being given this credit? A. No, sir.

Q. Can you state what suit it was that was pending that this credit referred to? A. Neither Mr. Downie nor Mr. Smith mentioned the name of the suit but as the only important suit the Keystone Driller Co. had pending at the time was the one against the Byers Shovel people at Ravenna, Ohio, for infringements, I presume that was what was intended.

Mr. Edgerton: The last answer is objected to as conclusion and is not a statement of fact, would therefore move that the same be stricken out.

Q. Do you recall what Mr. Robert Rex, or Rex Downie as he was usually called, position was with the Keystone Driller Co. at the time you made this call to the Beaver Falls office, about which you have just testified? A. I believe he was General Manager.

Q. At the time you were Credit Manager of the New York office, for the Keystone Driller Company, was there a gentleman employed there by the name of Mr. Howard Elmire?

Mr. Edgerton: Objected to as leading.

A. Yes.

Q. While you were Credit Manager of the New York office of the Keystone Driller Co., do you recall of any occasion that Mr. Rex Downie and Mr. Howard Elmire made a visit to Lakewood, New Jersey, to see Bernard R. Clutter? A. Yes, I knew of such visit because I discussed Clutter's account with Mr. Elmire, who was traveling salesman and who had occasion to see Mr. Clutter from time to time and in my talk with Mr. Clutter about the credit which he claimed, he stated that it was arranged while Elmire was there with Rex Downie at that time.

Q. Did you ask Mr. Elmire what took place on that visit with Mr. Downie to see Mr. Clutter at Lakewood, N. J.? A. Yes, and Elmire claimed that he did not know what took place. That Clutter and Rex Downie had their conversation off to one side and he did not know what was said.

Q. Do you recall whether Clutter ever paid out the accounts on the two machines about which you have been testifying? A. When I left the Company, these accounts were still open on the books, had not been paid up.

Direct examination closed.

Cross Examination by Mr. Edgerton.

Q. You are testifying entirely from memory, are you not? A. Yes, sir.

Q. And to facts which you aver took place over four years ago? A. Yes, sir.

Q. Did Mr. Downie or Mr. Smith give you any memorandum or written order to change or credit the books in New York at the instance of the discussion you have referred to in your answer to Q. 23? A. No, sir. But if credit was made as indicated in that answer, one copy of the memorandum would go to Beaver Falls and the credit was actually entered on the customers' ledger there as appeared in subsequent statements.

Q. Do you know whether or not there was some altercation between Mr. Clutter and the Keystone Driller Credit Department, concerning Mr. Clutter's receipt of certain accessories or parts for the machines he purchased? A. I do not think there was any altercation, but do know that one or possibly two of the buckets specified on his order for second machine, did not go out

on the carload with the machines but what adjustment of this was made, cannot say as these items were still pending when I left the company's employ.

Cross examination closed.

Deposition closed.

(Certificate of Notary omitted.)

Mr. May: If the Court please, the cross-examination in the deposition is not material at all—If the Court wants the record down.

The Court: I expect in this kind of a case I am making a record for the Circuit Court of Appeals, and if I didn't let it in, it could be put in as an offer to prove, so the thing to do is to let it in. I can't keep down the record. If counsel want to put things in that are relevant, they probably won't agree with you about it.

Mr. May: Well, we want to give the Court a chance to rule on it.

The Court: It would be in here as an offer to prove anyway.

Mr. Williams: We now offer in evidence these exhibits, Defendant's Exhibits 37, 38, 39, 40 and 41. These were the exhibits identified in the direct examination by Clutter. We offer in evidence two ledger sheets of the Keystone Driller Company, showing the account of the Clutter Contracting Company, beginning with an entry on September 9, 1924, and ending with—I guess the last entry is June 28, 1927.

Mr. May: We admit anything that they are liable to bring out on those exhibits.

The Court: Is that the Bernard Clutter account that involves these same shovels?

Mr. Williams: Yes.

Mr. May: There are a number of other items there, and if they will pick out any they want, that may help some. We would like permission to substitute photostatic copies, and keep the originals.

Mr. Williams: Yes, that may be done. We offer these as Defendant's Exhibits 93 and 94. I think it is admitted that these are ledger sheets of the Keystone Driller Company.

The Court: Yes, he has already said that that was their record.

Mr. Williams: And in explanation of the entries on this ledger sheet, I think it may be agreed, may it not, that in the credit column the letters "cs" means credit memorandum, and the letters "csh" means cash, and the letters "je" mean journal entry.

We also offer in evidence, and ask to be marked as Defendant's Exhibit 95 a copy, a carbon copy of the letter dated February 11, 1925, from the Keystone Driller Company to B. R. Clutter; and the next Exhibit No. 96, a duplicate original of the contract between the Keystone Company and Clutter for the purchase of the first Keystone excavator, the one on which there was to be a credit given.

The Court: Is that a conditional sales contract, or form of chattel mortgage?

Mr. Williams: No, it is in the form of a chattel mortgage.

Exhibit 97 is the invoice for that first machine.

Exhibit 98, unsigned agreement between B. R. Clutter and the Keystone Driller Company, identified by Clutter in his second deposition, as Plaintiff's Exhibit I.

The receipt from the Keystone Driller Company to Clutter for $500, dated April 14, 1925, marked Defendant's Exhibit 99.

Exhibit 100, also a receipt for $515, dated 5-23-25, from Clutter.

Next is the chattel mortgage on the first machine, from Clutter to Keystone on that first machine, No. 101.

Next is the carbon copy of a letter dated March 16, 1926, from the Keystone Driller Company credit manager to B. R. Clutter, Exhibit 102.

No. 103, carbon copy of a letter dated January 15, 1927, from the Keystone Driller Company credit manager to B. R. Clutter.

Exhibit 104 is an original letter from Clutter to Rex Downie, dated January 9, 1928.

Exhibit 105, a carbon copy of the letter dated January 18, 1928, from Keystone Driller Company to Clutter.

Next, Exhibit 106, original letter from Clutter to Rex Downie, dated February 6, 1928.

Next is carbon copy of a letter from the Keystone Driller Company by Downie, to Clutter, dated 2-16-28, Exhibit 107.

Exhibit 108, a canceled check from Keystone Driller Company to Clutter for $476.

Next Exhibit 109, original letter from Clutter to Downie, dated 11-15-28.

Exhibit 110 is an original letter from Clutter to Rex Downie, 11-28-28, a three-page letter.

Then 111 is a letter dated 11-13-28, which apparently should be 12-13-28, a three page letter from Clutter to Downie.

112 is original letter from George E. Wagner to J. V. Downie of the Keystone Driller Company, dated April 20, 1929.

Those Exhibits are now offered in evidence.

The Court: You know what is in this correspondence, do you, Mr. Richey?

Mr. Richey: Yes.

The Court: There is no use of reading all of them. What are those exhibits you introduced last?

Mr. Williams: I can briefly summarize them.

The Court: Just tell me what the exhibit numbers are.

Mr. Williams: Nos. 37, 38, 39, 40 and 41, and 93 to 112, inclusive.

Now I can tell you briefly, and would like to at this time, what these are. The ledger sheets, of course, show the account of Clutter with the Keystone Driller Company, showing the receipt of those two machines and credits, and various parts and charges for parts, etc. There is nothing on there showing anything about the credits referred to in these memoranda and letters. That I think is a significant thing, as we will argue in supporting Clutter, that this was a secret matter, which only he and Downie should know.

Now this Exhibit 95, a letter of February 11, 1925, from the Keystone Driller to Clutter. This was before this settlement was made. (Reads letter.)

Then they made their contract for the machine on the regular form and style, dated February 28, 1925, but had evidently not yet arrived at the agreement they were going to have made, and it was billed to him March 19 at $7740, with nothing on the invoice to indicate any credit of any sort. Then comes this contract which is not dated and unsigned, and which is evidently the only contract in writing that they had between them. It is acknowledged by Downie in the affidavit which he filed on the motion to produce as the contract made between

them, but it was not signed. In pencil on the top it is dated April 11, 1925, and reads as follows: (Reads contract.)

Then on April 14, 1925, there is a receipt by the Keystone Driller to Clutter for $500 in cash, and then another receipt for $515, cash payment applying on excavator as billed March 9, 1925, balance of settlement in the shape of seventeen promissory notes for $425, all dated April 14, 1925, and secured by chattel mortgage. (Reads affidavit.)

Downie says this is the contract.

The Court: What exhibit is that?

Mr. Williams: That is Exhibit 98. Then the letter of March 16, 1926, Keystone Driller writes Clutter telling him that the Bank has returned a note of his that they had sent for collection for four hundred and some dollars. On January 15, 1927, here is the first time there is any recognition by anybody other than Rex Downie that there is any credit due to anybody. This is a letter written by the credit manager, F. W. Ransom, apparently. (Reads letter.)

January 9, 1928, Exhibit 104, Clutter writes to Downie. (Reads letter.) On a page of it is a pencil memorandum, Downie's notation, 1904-contingent, final payment, and then there is written in pencil and crossed out "offer $500 instead of larger contingent payment."

Then the letter of Downie in reply to that, Exhibit 105, January 18, to Clutter (Reads letter).

Clutter replies to that under date of February 6, 1928, Exhibit 106. (Reads.)

Now Downie answers that under date of February 16, Exhibit 107. (Reads.)

And here is the canceled check for $476, which accompanied that letter, Exhibit 108.

Then the thing apparently dropped until November 15, 1928, when Clutter writes to Downie, Exhibit 109. (Reads letter.) And Downie writes him back December 3, Exhibit 38. (Reads letter.)

On November 28, then he comes back with a long letter, arguing his side of the case on the construction of the contract.

The Court: What is the outcome of it?

Mr. Williams: They argued back and forth between them, and the point of this whole thing is, without reading the letters, that both sides recognized that there was some sort of a memorandum in writing made.

The Court: Well, that is clear from one of the letters, and that is admitted, isn't it?

Mr. Williams: That is perfectly clear, and shows that they came to some sort of a deal, and apparently had reduced it to writing, but it was not signed. Clutter gave one reason, and Downie gave another reason, why it was not signed, and after the time the two years were up and the contingencies had not happened, and shortly thereafter the Keystone people took back the machine, and thereupon they had some argument, and they substituted or made a new deal whereby Clutter was to get cash of $1904 instead of the machine credit which he lost because he had to give up the machine, and then they wrangled back and forth on what that $1904 meant, when they were to get it, and how, and Clutter claims that they cut it in half, and then cut it in half again, and it was postponed, but the main point is that they made such a deal at one time on this machine, and, as we say, for the suppression of evidence dealing with this.

The Court: The crux of the whole thing is whether Defendant's Exhibit 98 was made, and what the effect of it, if it was.

Mr. Williams: And the subsequent conduct under it, and their subsequent understanding of the deal under it.

And when we come to consider that contract—Well, I don't want to argue the case now; I just want to state the facts. I think there is only this one letter that Mr. May seems to want me to read.

The Court: Is that the one you think is important?

Mr. Williams: No, this is the letter from Downie to Clutter, in reply to this three-page argument of Clutter, as to what he is entitled to. (Reads letter.)

There was a charge in the deposition apparently that Clutter sent his brother to Wagner and Downie, to apparently see if he could not blackmail them or blackjack them or something, into paying more money.

The Court: Who did this?

Mr. Williams: That is B. C., Bern's brother was supposed to have gone to Downie, I think the charge is, to see if they couldn't have him, blackmail him out of some more money. They were interested in the Star Drilling Company, which was threatened with infringement by the plaintiff, and according to their claim it was apparently a hold-up proposition, and according to Clutter's claim simply a thing they were trying to get out of

themselves, an infringement case. He doubtless had told them about this Joplin, Missouri, experiment, and this letter from Wagner is denying any such intention.

The Court: Well, give me those key letters, and I will read them myself. Is this all the testimony you have on this line now?

Mr. Corbett: Yes.

Mr. Richey: Are you going to put in those Rood depositions?

Mr. Corbett: No.

The Court: Has any affidavit ever been produced as to the abandonment of this experiment?

Mr. Richey: We produced it and submitted it to the other side. They have not offered it in evidence. It is among these papers that such a hullabaloo was made about, and we brought it up and submitted to them.

Mr. Corbett: When was it submitted?

Mr. Richey: At the trial here, in the envelope of papers—still in there, I think.

Mr. Williams: I thought you had put that in.

Mr. Richey: No, sir.

The Court: Well, I will put it in as the Court's exhibit.

Mr. Williams: I don't care whether it is in, only I don't want to vouch for it, is all.

Mr. Richey: I thought you wanted to vouch for Clutter.

Mr. Williams: Well, you vouched for Downie.

Mr. Richey: Yes, sir, but not for Clutter.

Mr. May: We offer as Plaintiff's Exhibits P-45 and P-46 letters from Keystone Driller Company to G. E. Wagner and B. C. Clutter.

The Court: Are 45 and 46 the same?

Mr. Richey: Yes, sir.

The Court: Do you want them in twice?

Mr. Richey: Well, they are addressed to different people.

Mr. Williams: Mr. May produces this affidavit of Clutter, dated April 16, 1925. It is not material to our case, but if the Court wants it in, there it is.

The Court: I think it should be in.

(Affidavit marked Defendant's Exhibit 113.)

Mr. Richey: Does that close your case?

Mr. Corbett: I think so.

Mr. Mahoney: We want to put in some more of these charts when we get a chance, and also if we have missed any of these depositions.

Mr. Williams: All depositions are now offered, if they have not been before.

The Court: All right.

Mr. Williams: And all exhibits that were marked as exhibits are now offered, if not offered before.

Mr. Richey: We offer in evidence those two photographs that were marked for identification as Exhibits 42 and 43. I now offer them in evidence as Plaintiff's Exhibits P-42 and P-43.

Mr. Corbett: We would like to preserve an objection until we see what they are.

The Court: All right. They are admitted, and if you have any objections, you can present them later.

Mr. Richey: Is your case closed?

Mr. Corbett: Yes.

PLAINTIFF'S REBUTTAL TESTIMONY.

ORLEY D. HANSHEW, a witness called by the Plaintiff, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Siggers.

(Narrative continued.) My name is Orley B. Hanshew. I am 48 years of age. I am a salesman for the Keystone Driller Co. I live in Beaver Falls, Pennsylvania. I think I testified in the suit in Cleveland against the Byers Machine Company brought by the Keystone Driller Company. I have a recollection of testifying in that suit as to the use of the ditcher scoop in 1914. This ditcher scoop was what they call the Clutter type ditcher bucket. I have refreshed my recollection as to the time when this use took place. In 1927 I went over the job and refreshed my memory. This first use of the ditcher scoop was in the spring of 1914 at Conway, Pa. I helped Mr. Clutter and my fireman install it on the machine after Mr. Markley had bought it. Mr. Markley was a contractor who owned the machine and for whom I worked for. I began working for Mr. Markley along in March, 1914, I believe, about the first of the month. Before I went to work for Mr. Markley I worked for the Crucible Steel Company, at Midland. I ceased working for this company in the latter part of February, 1914. When I worked for Mr. Markley I operated the Keystone shovel which he owned. When I first went to work for Mr. Markley the shovel was not complete; it was probably a week or so after I hired out before the shovel was completed. When I first went to work for Mr. Markley we did street work, grading with a skimmer bucket. The manufacturer of this skimmer bucket was the Keystone Driller Company. The first street we graded with that skimmer bucket was in Rochester, and from there we went to Conway, Pennsylvania. The job at Conway was a street and sewer job; grading the street and digging the sewer trench; laying the trench and paving the street. The time that I operated the skimmer scoop in Conway, Pennsylvania was in the early spring of 1914. After the skimming work was done on this street we used the same shovel, only with a ditcher attachment put on for sewer work. The ditcher attachment was a bucket with a stick attached on to the end of the boom. It had a pulling-in motion. I helped to make the change from the skimmer scoop to the inward moving ditcher scoop. I was as-

sisted in this work by Leroy Clutter and Charlie Eppers. Clutter's name was Leroy P. Clutter. Mr. Eppers was fireman on the shovel. He worked with me on this job after the change was made from the skimmer to the ditcher scoop. Part of this trench we had dug by hand while we were grading the street and then we started where they left off by hand digging, and I imagine the ditch was in that particular spot nine or ten feet deep. And after we were almost down to the finish we struck a small amount of shale. It was not so exceptionally large; just ordinary shale. When I said some of the work was started by hand I was referring to the ditch. The work was continued by the shovel, that is, the inwardly digging shovel that I have been referring to. This was the one that Mr. Clutter assisted in having put on the end of the boom. This inwardly digging shovel had two power actuated lines that were employed to operate it. Describing these lines and their functions, the boom line came off the drums and out through a sheave at the end of the boom, and back up to connect to the arms on the swing circle; and the other one ran down through the A-frame and down through the boom on an idling sheave and attached on the bail of the bucket. The bucket was hinged on the lower end of the stick; it had a slide latch on the stick. The latch was controlled by a trip line there, but I did not consider it a power line. To operate this ditcher stick in the digging cycle there were two power lines used, and another hand actuated line for tripping the latch. This permitted the bucket to move downwardly by gravity to dump the load.

Mr. Corbett: Your Honor, I think this witness ought to tell these things instead of being led at every step.

The Court: This is just a summary of what he had said so far.

Mr. Corbett: He did not say anything about a cycle at all.

The Court: That is implied from what he said.

Mr. Corbett: Objection to this on the ground it is leading; exception.

(Conference about court and counsel about photographs.)

The Court: This work is a forerunner of the Clutter patent?

Mr. Richey: Yes, to carry that date back of the alleged Vincennes use of the Mahoney Machine.

Mr. Corbett: He has a statement of a series of facts. If he is going to testify about operations, he ought to testify without having this statement of facts in his hands.

The Court: Some of these facts he has not covered in his testimony?

Mr. Corbett: No, Your Honor, he has not covered them in his testimony.

The Court: Ask him questions first; ask him facts on the photographs.

(Narrative continued.) Referring to the power-actuated hoistline connected by means of links to the boom, the stick is connected to the connecting bars on the end of the boom; at the top of the stick another pin for the connecting bars to go back to the sheave stem, and two vertical pieces of iron there goes from the boom up to the sheave. These two pieces of iron were pivoted on the end of the stick.

Q. I am speaking of the two pieces of iron that extended from the boom to the sheave? A. They work back and forth as your stick oscillates there. They are fixed in a vertical position this way, but they can go either back or forward. The stick goes in and out.

Q. That is, the two pieces of iron which connected the sheave to the boom were pivoted to swing in the plane of the boom, is that correct? A. Yes, sir.

Q. How about the links which connected the pivot axis of the sheave with the top of the ditcher stick? Were they pivoted to the ditcher stick or fixed? A. They are fastened on a pin that goes through the top of the stick and back to the pin that goes through the sheave.

Q. Was that pin connection a pivoted connection or a fixed connection? A. I don't know whether you could call it a pivoted or fixed connection. The distance between those two pins never changed, but the connecting bar works on the pin in the stick and also on the pin to the sheave.

Q. What was the effect of applying power to haul in this hoisting line? A. To pull your bucket into the dirt, you mean?

Q. I am talking about the hoisting line not the hauling line? A. It starts your drum in operation to wind up your line; as you wind up your line it naturally raises your boom higher; as you slack off and release that it goes back.

Q. What happened when the boom was hoisted by the hoisting line? A. That raises the boom up, takes it off the ground or raises it or lowers it into the ditch.

Q. Is there anything raised besides the boom? A. Your bucket and stick will naturally go with the boom.

Q. Were the bucket and stick so suspended as to maintain a plumb position or did they have movement when the boom was hoisted? A. If you raised your boom line and not engaged your closing line, your stick and bucket would naturally stick out like this, until you got to a certain height, and then the weight of the bucket would drop down to a certain degree.

(Narrative continued.) That is to say, if the hauling line were slacked off, and if the hoisting line was pulled in, the stick and scoop would be extended outwardly with that machine which I operated. When power was applied on your bucket line this would bring your bucket in on instroke; that is, towards the machine. The work done by this machine at that time if I recall rightly was possibly two and one-half, maybe three squares. This work was all done on one street, Second Street. This machine dug the ditch very successfully at that time. We encountered a small amount of shale; not a great deal. We could not pull directly through; we could scrape at it and get through it. The scoop on the lower end of the ditcher stick was armed with digging teeth. We dug this bucket through the shale and by the bucket and the boom falling in the ditch had a tendency to kick out pieces of shale, which helped us some. The nature of the power unit on this machine was a single cylinder steam engine vertical type. The hoisting and hauling lines were controlled with two levers on the drum. One lever for each line. I don't remember the actual depth of the ditch at that time. The deepest part of it was possibly nine feet or maybe ten feet. The machine was successful in digging those two or three blocks of trench which I have testified about.

The Court: Do you want him to identify these photographs?

Mr. Siggers: Yes, I do. I will come to that.

The Court: I assume Mr. Corbett is objecting to these things on the corner.

Mr. Corbett: I am objecting to the group that has a series of statements here. That was not the group. We object to that statement on there until it is proven.

Mr. Siggers: These were the ones in the Cleveland suit. This is exactly the way the exhibit was. We did not want to destroy the exhibit.

The Court: He is objecting, and I think properly so, to the legend at the corner of these photographs here.

Mr. Corbett: I wish your Honor would look at those statements there; that is the thing I object to most strongly, to hand the witness those papers and ask him to testify to it, whether it was in the Cleveland suit or not.

The Court: He has proved now that this man thinks this work was done in the spring of 1914.

Mr. Siggers: You see, Mr. Corbett, these legends here are not on these, and these are the ones introduced in evidence.

Mr. Corbett: I object to handing these to the witness, with signed statements of witnesses we have not examined, and telling him what the dates are.

The Court: I don't see why you should mutilate those. You can tuck the corners back or stipulate that the corners of the exhibits are not offered in evidence, the legends. No one has a right to complain about that.

Q. I hand you a group of four photographs, stapled together, and I will ask you to state whether or not you have ever seen them before?

The Court: Seen the photographs?

Mr. Siggers: Those identical photographs, yes, sir.

Witness: Yes, I have seen them.

Q. Did you testify in the Cleveland suit about those photographs? A. Yes, sir.

Q. Are you able to state whether or not you appear in those photographs? A. Yes, sir.

Q. Will you point out to the court? A. The operator there.

Q. Will you compare this machine with the machine you operated in the spring of 1914? A. That is the same machine.

Q. Are you able to state positively it is? A. Yes, I know it is.

Q. Are you able to fix the date of this machine more definitely than you have heretofore? A. No, sir, not any more definitely. It was in the early spring.

Q. Do you know what month it was? A. I imagine it was in April.

(Narrative continued.) I think to fix this date more definitely we have some record of the checks that were used in the payment for that work. The records I am referring to are the records of the Borough of Conway, Pennsylvania. Those are the records I am speaking of, the cancelled checks we have.

Q. I hand you a group of four photographs and will ask you to state whether you have ever seen those before or not? A. Yes, sir.

Q. Can you identify them more definitely, stating what they are? A. Those are the records of the work done there.

Mr. Williams: Just a moment. Have they been offered yet?

Mr. Siggers: No, it has not been offered yet.

Mr. Williams: He did not make that record.

Q. Were you present when these photographs were taken? A. I don't think I was present when the photographs were taken, but I was with Mr. Cullen when he got that.

Q. Who was Mr. Cullen? A. He was secretary on the council at that time.

Mr. Siggers: Your Honor, these first four photographs are to be stipulated in the record.

Mr. Williams: That is, I agreed with Mr. May that the certified copy of the record of the Borough Conway would be admissible; but not the checks; they are not part of the record.

Mr. Siggers: That is the first four photographs; and it is agreed that these are exact reproductions of the minutes of certain meetings of the Borough Council.

Mr. Williams: No. You have a certification here, certified by the Clerk of the Borough Council; and we said he would make no objection simply because of the fact that the record was photographed—a part of the record—not the complete record; we would not object to the certification of the record itself or that part of the record; but we did not concede or admit that the certification covered photographs of certain checks attached to it. That is not part of the record. It is not assumed to be.

Mr. May: You mean not a complete copy of the minutes, but complete so far as this matter is concerned.

Mr. Williams: In other words, we are not objecting to the character of the certification of that part of the

record that is present, the record of the Borough of Conway.

Mr. Siggers: You agree also that these are correct reproductions of those minutes?

Mr. Williams: We do not agree to anything. We are not objecting to that certification.

Mr. Siggers: Are you not stipulating?

Mr. Williams: No.

The Court: What do the minutes purport to show?

Mr. Siggers: They purport to show the approval of this sewer and ditching job at Conway, Pennsylvania, in April, May and June of 1914.

Mr. Williams: In order that Your Honor may understand what the controversy seems to be, I will show you: this is simply a photograph of four pages of the Borough record.

The Court: Yes.

Mr. Williams: It begins anywhere and stops anywhere. We will not make any objection that it is not a complete record; we will take the certification as a correct record of those minutes of those pages. But we say we do not concede that the certification can cover those checks because they are no part of the record. Somebody just made a copy of some photographs with some checks.

The Court: I don't think they will need the checks.

Mr. Siggers: I can remove those.

Mr. May: Mr. Williams first thought he would let them go in on the statement of the photographer who took them. Then he concluded he would not.

The Court: We are not interested in fixing the date of the final estimate.

Mr. Siggers: I offer in evidence as Plaintiff's Exhibit P-47 the four photographs mentioned, together with the attached certificate of Harry P. Cullen, dated June 2, 1927.

The Court: All right. They will be received.

Mr. Williams: If the Court please, it still has those checks attached.

Mr. Siggers: I am going to disattach them as soon as possible.

Mr. Williams: Oh, all right.

(Narrative continued.) I think the day we finished the grading with the skimmer bucket we received the ditcher bucket. I don't remember how long it took us to do the skimming. We covered three or four blocks in the

skimming work, about three blocks I think. I don't exactly remember the exact number of days it took. I would judge it took around in the neighborhood of ten days or two weeks, because at that time of the year you would have more or less bad weather. It must have been along the forepart of April some time when I began the skimming job; I don't remember just definitely the day; I did not keep a record of the dates we started or the dates we finished. After the skimming job was done we started on the ditching. We used the same machine only with the ditcher attachment instead of the skimmer. I worked on that machine possibly a year, a little over a year. After that I did various jobs, and then I went to work for the Keystone Driller Company. After we had finished with this machine on Second Avenue in Conway, Pennsylvania, I think we back-filled the principal part of the sewer ditch, and some cleaning up on the streets. From there we went to Midland. I think the Midland job possibly was the last job we did with the machine—I did any way. After the Conway job we did not continue to use the ditching attachment, I did not have any sewer job when I ran that machine after that job was done. After that Mr. Markley used it for some time and then he sold it. I don't know the man's name. He sold it to some Italian up in Portland, Maine. I saw it in Portland, Maine in '22. I don't remember the contractor's name. It was still in use in 1922.

Q. Referring to the first photographs about which you have testified, are you able to identify the people in that photograph besides yourself? A. Yes, sir. The man in front here is Mr. R. M. Downie. The man directly behind him is Leroy Clutter. Myself on the platform. The fellow leaning on the coal box is the fireman, Charley Eppers.

Q. In the second photograph, please identify the people? A. Mr. Downie and myself seems to be all that shows in that picture.

Q. The third photograph? A. That is me on the platform; the fireman is leaning over the back platform putting in some coal; and I don't know who this fellow is—just somebody looking on.

Q. The fourth photograph? A. It is Mr. Downie right back of the brick pile; myself on the operator's platform; and the fireman standing at the back end of the machine.

Q. You referred to Mr. Downie in three of these four pictures, which Mr. Downie was that? A. It is Mr. R. M. Downie.

Q. What relation was he to Rex Downie who testified in this suit? A. Rex Downie's father.

Q. Was R. M. Downie connected with the Keystone Driller Company? A. He was the originator of the Keystone Driller Company; also general manager.

Q. What interest did Mr. Leroy Clutter have in that machine? A. He was working for the Keystone Driller Company.

Mr. Corbett: We doubt if this witness is qualified to say that. He was not even employed by the Keystone Driller Company. Objection to that.

The Court: I don't know whether this witness was or not.

Mr. Corbett: He was not employed by the Keystone Driller Company.

The Court: I know that you are employed by the Osgood Company. You will have to test that on cross examination. If it develops he is guessing at it or it is hearsay, the court will rule it out.

Mr. Siggers: I offer in evidence the four photographs concerning which the witness has testified. But I will remove those statements.

Mr. Williams: There are several things we object to on that, I think.

Mr. Siggers: We cannot remove it.

Mr. Corbett: We can object to it, though.

Mr. Richey: We just asked him what is on the photographs.

The Court: I understand you want to leave it intact as it was in the Cleveland suit.

Mr. Siggers: Yes, except that we are willing to take off those typewritten statements. We cannot possibly remove that writing.

Mr. Williams: That is your fault.

Mr. Siggers: That is the witness right here. I will ask him to read that into the record.

Mr. Corbett: We think it is a very simple matter to put in these photographs without this matter of the Cleveland suit.

The Court: On the other hand he can offer the photographs with the understanding that the writing on the back is not offered. The record may show that the writing on the back of these photographs is not offered in

evidence, and is not in evidence; unless you put it in by cross examination.

Q. Have you ever gone back to Second Street in Conway, Pennsylvania, revisiting the site or location where this work was done, in order to refresh your recollection? A. I did, in 1927.

Q. Can you fix the date more definitely?

The Court: The date when he went back there?

Mr. Siggers: When he went back to this place where this sewer work was done by the Clutter type machine.

A. I cannot give you the exact date on that. I know it was in the summertime.

(Narrative continued.) I don't remember whether it was before or after I testified in the Cleveland suit against the Byers Machine Company. I did not have these four photographs with me when I revisited the site of this work. I recognize the neighborhood, that looks like Second Street in Conway. I am able to state positively that these photographs show the machine which was used to dig the ditch of two and one-half or three blocks along Second Street in the Spring of 1914. I do not remember when these photographs were made. They were photographs taken at various times on the job there. The piles of brick shown in the foreground of each of these photographs were used for paving that street. Some of these bricks were piled up there before we started ditching. They were all there during the ditching and would be there until the street was completed and ready to put the brick down. The tile shown in the first, second and fourth photographs were for the sewer there. They were used for the sewer, putting in that trench we were digging there with the machine.

Mr. Siggers: I offer in evidence the four photographs about which the witness has testified, without the typewritten notes, and without the written notes on the back of the first photograph; and I will ask that they be marked Plaintiff's Exhibit P-48.

The Court: They may be received.

Mr. Williams: Note our objection and exception to the admission of the photographs by reason of the memoranda and legends written on them or printed on them.

Mr. Siggers: What legends?

Mr. Williams: On the face and on the back of the pictures.

Mr. Siggers: What legends are you talking about, anything on the face of that one.

Mr. Williams: Not on the face of number one, no; on the back of number one; on the face of number two.

The Court: They are not offered. They are not in evidence.

Mr. Siggers: How about No. 3, do you object to that?

Mr. Williams: I have just stated what I object to.

Mr. Siggers: You do not object to number 3, then?

Mr. Williams: Also, I don't think they have been sufficiently proven.

The Court: It will be received and objections noted. It is the understanding of the court that nothing is offered except the photographs.

Q. Referring to the back of the first photograph, do you recognize the handwriting of the notation there; if so, state whose it is?

Mr. Corbett: I don't believe it is admissible under any circumstances in this case. He has testified to the facts.

Mr. Richey: The only thing is that is all of that date; that was three or four years ago; and I think it is a memorandum from which he can refresh his recollection.

The Court: He has already testified; he does not need to refresh his recollection. It may be admissible by the time we get through the cross examination.

(Narrative continued.) After I went to work with the Keystone Driller Company in 1915 I continued to work with the same type of machine as shown in these photographs, Plaintiff's Exhibit P-48. The first machine I demonstrated was practically the same as the machine shown in that Exhibit. I continued to demonstrate this type of machine as long as that type was built; and then when they changed their design and improved them I demonstrated that. I can not state anything about when there was a change in designs because I was not working in the engineering department. I did not sell machines at that time I was demonstrating.

The Court: You were an operator and a demonstrator?

A. Yes, sir.

(Narrative continued.) I am a salesman at the present time. Referring to the first, second and fourth

photographs of Plaintiff's Exhibit P-48, the two links connecting the sheave on the top of the boom at the upper end of the stick were bent from hitting on the edges of those connecting bars, that the stick connect on to the boom. I believe they also call them extension irons. This contact could take place most any time in the operation of the machine; more so when the bucket was in close to the boom on the inward motion. The reason they bent was from continued hitting there. Possibly if you pull your bucket clear through until your bail hit your boom probably you would have bent it in one stroke. If you were the least bit careful about it, you would not hit it so hard; it would take some time to bend it by hitting it lightly. No one besides myself operated this machine. I don't suppose the machine was used over a day or so before these bars became bent in this manner. You understand me correctly that this bending took place when the scoop was drawn in close to the boom.

Q. Was this bending of the links regarded as an accident?

Mr. Corbett: Objection to that, Your Honor. He is not competent to say whether it was regarded as an accident. It might have been designed for that purpose.

The Court: Ask him how it happened.

Q. How did that happen? A. From hitting, pulling the bucket in to the extreme pull-inward stroke.

The Court: Was that pulling-in to that extent done deliberately or was it inadvertent because of lack of control? A. No, sir. If you got a full sweep of the stick there, you would naturally come clear up to the top of the bank, and that would bring the bail in against your boom; taking that full stroke there you naturally would bend that because it hit out there before your arc was completed to the extreme.

(Narrative continued.) Referring to Defendant's Exhibit 35, I am able to identify the drawings in that Exhibit, that seems to be the stick, connecting bars, pin, teeth, latch slide bearings, the back of your bucket, that is, the drop bottom dump bucket we have been talking about. The Clutter type bucket I suppose you would call it. Examining this [illegible] it seems to be correct as used by me on that first [illegible] I would say that the striking of the links connecting the sheave with

the upper end of the ditcher stick against the extension irons was not an advantage at all and I would say that it was not any disadvantage.

Mr. Siggers: That is all.

Cross Examination by Mr. Corbett.

(Narrative continued.) The machine shown in Plaintiff's Exhibit P-48, does not show the usual dumping position of the device; it would be pretty hard to get at a usual dumping position. I think that was one of the dumping positions; it seems to be out far enough to let all of the dirt out of it. To operate this device you start your digging operation by throwing that bucket out a little farther than it is, to get down to your ditching. I am referring to the first photograph, you get out a little further than that, when you start your digging; engage your hauling line and pulling back through the dirt; by the time you got your bucket full, swing it to the side and dump it. To dump it there is a line on there. You pull this latch lever over here, either that way or cast it clear out. Sometimes it would go out with the bucket latched, and sometimes it would unlatch it. You can do it either way. To close the bucket ordinarily you drop it back in the ditch and automatically when it hits the bottom of the ditch it would go shut. You could also close it with your hauling line—snap it like that—and pull it up with the hauling line. This device had small side rake teeth that show there and stick out in that position. The fireman tipped the bucket the most of the time. It did not take all of his time to fire. Sometimes he had a water boy do it. We usually had a man on the ground to trip the bucket; if you did not have a man on the ground you could kick it out yourself. By this I mean you could let go of the hauling line and it would kick out far enough to dump itself, without tripping the bucket at all. If you tripped continuously you would have to have a man on the ground to trip the bucket with that type of machine. I hired out to S. B. Markley about the first of March, either a day or two after the first of March. I testified in the Byers suit that I went there in the early part of April. I meant on this job. I was on the payroll before that time. The first job we did was a skimmer job, that was down in Rochester, Pa. This job took us a couple of days. We stayed in Rochester just for that job and then we went to Conway. I think we went direct to Con-

way from Rochester. We took the skimmer scoop machine with us. I suppose we used the skimmer scoop machine in Conway possibly a week or ten days. We were grading the street there, with the skimmer scoop. We used the ditcher after we finished with the skimmer scoop at Conway. We went to Conway in April. It must have been the forepart of April because we did the street grading before we started. After that, we dug the trench two and one-half or three squares long. I don't remember exactly how long it took us to do that. Possibly it would take us a week or ten days; maybe two weeks; it depends upon the weather a lot. This ditch must have been for eighteen inch pipe; we probably had a twenty inch or twenty-four inch trench. I don't know what the average depth was; some places it ran eight, nine, possibly ten feet. We completed the digging of that trench with this ditcher. I cannot estimate what the actual distance was no closer than I gave you. I don't know what distance these blocks ran. After this trench was dug I went with the machine to Midland. In Midland we used the skimmer scoop. We used this skimmer scoop from that time on up until I finished that job down there, and when we finished that job down there we had no other work and I went with the Keystone. This job at Midland was an extension to Midland Avenue. I went to work for the Keystone the first of March, 1915, around that time. We did not have the ditcher attachment with us when we went to Midland, we did not take it to Midland; we had no use for it at Midland. The ditcher attachment was kept by Mr. Markley up there at his warehouse in Rochester for a long time.

Mr. Corbett: That is all.

Mr. Siggers: That is all.

Paul Sessions, a witness called by the Plaintiff in rebuttal, being first duly sworn, testified as follows:

Direct Examination by Mr. Richey.

(Narrative continued.) My name is Paul Sessions. I live in Cleveland, Ohio, and I am employed by the firm of Richey & Watts of counsel for the Plaintiff in this case. On Friday the 6th day of March, 1931, I went to Akron to watch the operation of one of the Keystone No. 4 machines. I know it was a number 4 because there was a label on one side, a large "Keystone 4." When I saw

the machine it was excavating on a sewer job on a side hill sewer excavation. It had gone through a layer of top soil and was down in a layer of sandstone. I took moving pictures of the machine operating there and I brought them with me. I will exhibit them.

Thereupon, a film of moving pictures was shown, during which the following comments occurred:

Witness: This is just a general view of the machine working. Here is a close-up view of it going into the excavation as they are getting down in the sandstone stratum.

Q. How thick was that sandstone? A. I should judge probably a couple of feet thick.

Witness: There is the impact of the teeth against the stone. This shows the excavation down here. This is a view down in front of the machine, down in the excavation. Here is the excavation. Here is the stick and boom up above.

Q. Is that a commercial job they were working on? A. It was.

Q. Do you know the name of the contractor? A. A Youngstown contractor. I have the name. I can't recall it right now.

Witness: There is another close-up going down in the rock, showing the impact and the breaking into the rock.

Q. Were those parts broken by the machine? A. Yes, sir.

Witness: You can see the "Keystone 4" on the cab of the machine. This is a closer view of the bucket striking the rock and breaking it. This shows it being drawn back and removed from the excavation. This shows the bucket striking the side.

Q. What are those marks? A. Those are the marks of the teeth.

The Court: What is that trench for?

A. A sewer excavation.

Q. What was the condition of the trench, wet or dry? A. The soil was not particularly dry; it was not wet; it was moist.

Witness: This shows it digging into the rock.

The Court: Do you care to ask him any questions, Mr. Corbett.

Mr. Corbett: Where was this job?

A. It was between Akron and Cuyahoga Falls.

Mr. Corbett: Could you locate it more definitely?

A. It was on the street which extends from Cuyahoga Falls.

Mr. Corbett: Who was the contractor?

A. I have that. Frank George, of Youngstown, Ohio, was the contractor.

Mr. Corbett: What road did you say?

A. Front Street.

Mr. Corbett: Right in Akron?

A. No, sir, I would say a mile south of Cuyahoga Falls.

Mr. Richey: Did you bring some specimens of the stone?

A. I did.

Mr. Richey: Will you produce them?

(Witness does.)

Mr. Richey: I offer the film in evidence as Plaintiff's Exhibit P-49.

Mr. Corbett: We want to object to it.

The Court: Let us have the objections later.

Thereupon a second film was shown, with the following comments:

Mr. Richey: Let the record show we are now showing a film of the demonstration made of the plaintiff's machine on the first day of the trial.

Mr. Corbett: Indicate what model that is.

Mr. Richey: The record shows what model it is.

Mr. Corbett: You mean at the Sam Davis Coal Yard?

Mr. Richey: The Sam Davis Coal Yard, the second day of the trial, March 4.

Mr. Richey: Those were undercutting strokes. I offer that film in evidence as Plaintiff's Exhibit P-50.

Mr. Corbett: Objected to as being immaterial and having no value.

Mr. Richey: These stones the witness Sessions produced I offer in evidence as Plaintiff's Exhibits Nos. P-51 and P-52.

Mr. Corbett: I object to the introduction of these films. We were not present at that demonstration. It is merely an ex parte proceeding at best and has no weight.

Mr. Richey: That is all the direct examination.

Mr. Corbett: No cross examination.

The Court: The exhibits will be admitted and exceptions saved.

Mr. Corbett: Note an exception.

Mr. Richey: I would like to ask him one more question. Mr. Sessions, these marks on these stones, what are they?

A. Those are the marks of the teeth on the scoop.

Q. On the ditcher machine? A. On the ditcher machine.

E. M. Morrison, a witness called by Plaintiff in rebuttal, being first duly sworn, testified as follows:

Direct Examination by Mr. Edgerton.

I own and operate my own machine. It is a Keystone 4, 1926. I keep a pretty close check on maintenance and use it a lot of times in figuring on jobs. I will say it takes anywhere's from three to four dollars a day on repairs, cables, and up-keep. Twelve dollars a day would be an unreasonable amount of upkeep for me on the Keystone Machine. An operator of a Keystone Machine only undercuts where he needs it; any place where it is necessary, he does it; the majority of them I have seen. I don't believe an operator could hold a job if he could not undercut with this machine, the way the things are now; there are too many men—

Mr. Corbett: Objection to that, his opinion whether an operator could hold a job or not; it is leading; he is merely giving his opinion.

The Court: I guess that is objectionable. He is not qualified to answer that.

(Narrative continued.) I know what a blind spot is on a Keystone Machine.

Q. Do the other operators who work with you know about it? A. They must.

Mr. Corbett: Objection. He does not know what the other operators know.

The Court: Unless he knows from what they said and what they have not said.

Question read.

A. Why sure.

(Narrative continued.) I attended the demonstration on March 11th out at the Sam Davis Coal Yard, demonstrating the Keystone Machine. I also attended the demonstration on March 4th where the Keystone demonstration was made.

Q. I now hand you five photographs, marked A, B, C, D, and E, and ask you to state if these illustrate the type of material, the types of soil that you have encountered or seen at various times in your experience in excavating?

Mr. Corbett: Are we going to have a chance to find where these places are that these photographs show?

Mr. Richey: You may cross examine.

The Court: Have you got them marked with exhibit numbers?

Mr. Edgerton: Not yet. I was going to offer them.

The Court: You had better mark them so that the record will be clear.

Witness: Yes, I have seen machines work in stuff of that type lots of times, and I have worked in it.

Q. What kind of machines have you seen working in soil of this type, Mr. Morrison? A. I have seen the Keystone and other machines at it.

Q. The inward arc? A. The inward arc.

Mr. Edgerton: The photographs just examined by the witness are now offered in evidence as Plaintiff's Exhibits Nos. P-53, P-54, P-55, P-56 and P-57.

The Court: Merely to illustrate the types of soil in which these machines will work?

Mr. Edgerton: Yes, Your Honor, that is the only purpose of them.

The Court: All right. They will be received.

Mr. Edgerton: You may have the witness.

Mr. Corbett: There is no cross examination.

Howard H. Elmire, a witness called by the Plaintiff in rebuttal, being first duly sworn, testified as follows:

Direct Examination by Mr. Edgerton.

(Narrative continued.) I have seen Mr. Green who testified in this case previously undercutting with a Keystone machine in the Bronx, New York.

The Court: Which is Mr. Green, the last "juror" there?

Mr. Edgerton: Yes.

The Court: I remember him now.

(Narrative continued.) I have seen other operators of Keystone Machines undercutting from time to time and throughout the section of the country in the east where Mr. Green has testified that he operated. The abutments operate to avoid the blind spot in the Keystone Machine. I have seen many Clutter machines in operation. They did not have wooden blocks in the latch slide, such as the slide 16-A in the Plaintiff's Exhibit P-1 —that is the Clutter patent (patent shown witness)—in the slide in the part 16-A; to prevent the latch from operating. I never saw any in there for any purpose. I attended the demonstrations of the Keystone and Osgood Machine at the Sam Davis Coal Yard, March 4th and 11th, respectively. I have a copy of the memorandum of April 11, 1925, referred to in the Clutter deposition.

The Court: The Clutter deposition read this afternoon?

Mr. Edgerton: Read this afternoon, Your Honor.

Mr. Richey: What was that exhibit number, the contract offered in evidence?

Mr. Williams: Defendants' 98.

The Court: I have a copy.

Mr. May: This is for the purpose of contradicting Mr. Clutter's deposition.

Witness: Yes, I have a copy.

The Court: You mean you have a copy here with you?

A. I have it here.

Q. Where did you get this copy, Mr. Elmire? A. Mr. Bernard R. Clutter gave it to me.

Q. Where has it been ever since he gave it to you? A. I took it home when he gave it to me and took it up and put it in my safe deposit box where I keep all my other papers, in the bank.

Q. Where is that and where has that been kept? A. In Arlington, New Jersey; and it was kept in the First National Bank & Trust Company, at Arlington, New Jersey.

Q. Were you present when the affidavit No. 113 was signed by Mr. Bernard Clutter? A. Yes, sir.

Q. You saw him sign it? A. Yes, sir.

Q. You saw and heard him take the oath? A. Yes, sir.

The Court: Who else was present?

A. Mr. Downie.

The Court: Rex Downie?

A. Rex Downie.

The Court: And the notary public?

A. And the notary public.

The Court: Who was the notary?

A. A man by the name of Birch.

The Court: Where did you get him?

A. At Tom's River, New Jersey.

The Court: How far is that from Bernard R. Clutter's home?

A. About ten or fifteen miles.

The Court: You took him about ten or fifteen miles, did you?

A. We were down on the road job where he was working between Lakewood and Atlantic City, and where he was working it was below Tom's River; and we come up and stopped at Tom's River at this notary.

The Court: That is, he worked at other things besides being a notary?

A. He was a notary connected with a garage where they issued—

The Court: Chattel mortgages?

A. Automobile licenses and the like of that.

The Court: Is he living, do you know?

A. I could not say now.

The Court: You never saw him since then?

A. No, sir.

Q. What did Bernard Clutter say to you when he gave you the agreement to keep? A. Mr. Clutter gave it to me and said he would give me this copy of this memorandum to hold as a referee; that he could see it or Mr. Downie could see it any time that either one of them wished to see it.

The Court: You were on friendly terms with Bernard R. Clutter, were you not?

A. Yes, sir.

The Court: He never signed that, did he?

A. No, sir.

The Court: But this affidavit was signed?

A. Yes, sir.

The Court: Was there anything said about why it was not signed?

A. The memorandum?

The Court: Yes, anything said by anybody why it was not signed, or was anything said about signing it or not signing it?

A. It was said no need of signing this, that the affidavit, Mr. Clutter said that would be enough to show that he abandoned the experiment.

The Court: Had somebody asked him to sign the agreement? How did it come about he did not sign it?

A. We were talking it over about if signing this or not, this agreement.

The Court: Did the notary hear all this too?

A. No, sir.

The Court: Where was he?

A. The talking over of this on this memorandum was in Lakewood.

The Court: Was not the notary present there?

A. Not on this here when we were talking about this.

Q. You know Mr. F. W. Ransome? A. Yes, sir.

Q. Do you know where he went when he left the Keystone Driller? A. He went to the Star Drilling Machine Company, Akron, Ohio.

Q. Was that immediately after he left? A. Yes, sir.

Q. Do you know how long he remained with the Star Drilling Company? A. One year.

Mr. Edgerton: Your Honor, I want to ask if you have in your mind Mr. Elmire's statement as to the meeting when Mr. Elmire was present and the time when they were with the notary?

The Court: No, I have not the sequence of events. I thought I would rather have you men bring it out after I got into it a little bit.

Mr. May: I have the impression the court got the idea, from questions he asked Mr. Elmire, that the notary was on this road job.

The Court: No. The final notion I got was that the notary was there but did not listen in on all the conversation; these men had their talk before they went to his office to have the affidavit acknowledged.

Mr. May: That talk was a different place from the notary's office. The notary was in Tom's River, New Jersey.

The Court: Well, I have not got the sequence of events. Go ahead. Bring it out in your own way.

Q. Will you please state who was present the first time Mr. Bernard Clutter and Mr. Downie and yourself had this meeting at Lakewood; whether or not there was any one else present at that meeting? A. The first meeting?

Q. Yes? A. We were at Mr. Clutter's home and there was nobody present but the three mentioned.

Q. And then will you state, please, where the next meeting was and who was present? A. The next meeting was—we went down and met Mr. Clutter on a road job he was doing at Lawrence Harbor. Then we went from there on down. He had another job below Tom's River on the road to Atlantic City. We went down there. He wanted to see something about the job. And then we come from there back to the notary in Tom's River. He signed the affidavit, and we went from there to Lakewood and we had dinner there in a restaurant in Lakewood that evening.

Q. When was it then that he gave you this agreement? A. In Lakewood when we were having dinner, after he come outside. We stood outside and talked outside the restaurant on the sidewalk; and there is where Mr. Clutter handed me the memorandum.

The Court: How did he happen to hand it to you, at your suggestion or his?

A. No, sir, it was his.

Mr. Edgerton: That is all.

Cross Examination by Mr. Williams.

Q. Have you got a copy of the memorandum with you, Mr. Elmire? A. Yes, sir.

Q. Let us see it, will you please?

(Shown counsel.)

The Court: Do you know whether one is a carbon copy of the other?

A. I do not.

Mr. Williams: We are just looking to see, Your Honor.

Q. I notice you took that out of an envelope, Mr. Elmire, was that the envelope in which it was placed at the time? A. No, sir, this is an envelope my wife put it in and mailed it to me.

Q. Just recently? May I look at it, please?

(Shown counsel.)

The Court: During the trial?

A. No, sir, she mailed it to me while I was in Beaver Falls, Pennsylvania.

The Court: When you were getting ready to come up here?

A. Yes, sir. There is a notation there and the stamp on it: November, 1930.

Q. Where was this memorandum agreement typed up? A. Mr. Downie had it.

Q. Mr. Downie had them typed out before he went down to see Clutter? A. Yes, sir.

Q. How many copies did he make of it? A. That is all I know of.

Q. That is, the one copy you have is the only copy you know of? A. No, sir, these two.

Q. Oh, by these two you speak of, you mean the one you had in your possession and the copy marked as an exhibit here? A. Yes, sir.

Q. And at this meeting he took this—this was a carbon copy, the same impression as the original, was it not? A. I don't know as it is a carbon copy or not.

Q. But when you and Downie went down there, Downie had with him these two copies, and had no more so far as you know? A. Not so far as I know.

Q. But he did have these two copies? A. Mr. Downie had these two copies.

Q. You went down as I understand it, to Lakewood, you and Downie, together to see Clutter? A. Yes, sir.

Q. You say you talked with him at Clutter's house, and then you went down on a road job at Tom's River where this notary was? A. Not on the trip where we took him to his house.

Q. Oh, what was the date of this first trip, then?

The Court: Do you know how long it was before you went down on the second trip?

A. I would say two weeks to three weeks or so.

Q. The first time you went down there, was that the time these papers were taken down? A. No, sir.

Q. You had a talk down there, then, some two or three weeks, at Lakewood, before you went down with this memorandum? A. Yes, sir.

Q. What was the conversation at that first trip? What was said there? What was the purpose of the trip? A. The purpose of the trip—Mr. Downie went down to see Mr. Clutter. He said that they had some kind of a deal on, and we talked in general, a little this and a little that.

Q. You mean you and Clutter and Downie talked? A. Yes; and when we went to leave I went out and sat in the car, which was parked at the curb, and Mr. Downie and Mr. Clutter stopped in the yard and stood there and talked for, Oh, I would say three or four minutes.

The Court: How far were they from your machine?

A. About thirty or forty feet.

The Court: Did you overhear any of the conversation from that distance?

A. No, sir.

Q. What you had talked about before, while you three were together, was not any matter of any consequence, as you remember? A. No, sir, on the first trip I don't remember more than it was just general, as we knowed Clutter quite a while.

Q. But the business that Clutter and Downie talked when they were separate you did not hear? A. Not the first trip, no.

Q. And then when you went down the second trip, you and Downie, then is when you took this memorandum already typed up, and you also took, did you not, that affidavit that Clutter signed? A. Yes, sir.

Q. And those papers were already prepared before you left your office or place of business? A. I did not see them prepared.

Q. Anyhow you took them with you? A. Mr. Downie had them, yes.

The Court: That is the first you saw of them, in Mr. Rex Downie's possession, is that it?

A. Yes, sir.

Mr. Williams: You asked if they were copies. I think the one is a carbon copy of the other. The typing indicates so.

The Court: Are these carbon copies, Mr. Richey, do you know?

Mr. Richey: I have not checked them, Your Honor. We will look at them tomorrow in daylight. Maybe we can tell.

The Court: We can tell pretty well here. It looks as though they might be carbon copies.

Q. I notice on this copy—you say you kept the original—

Mr. Elmire: Two pencil lines drawn around the word "Pittsburgh" and the word "Kansas." Who put those lines there?

A. I don't know.

The Court: Were there any changes made there that night when you went back the second trip, the second day? A. Not that I know of; not that I recall.

Q. I notice on the top of that paper, in pencil, the words "Copy left with H. H. Elmire, received at"—

The Witness: Beaver Falls.

Q. November 6, 1930? A. Yes, sir.

Q. Is that when the copy was left with you, November 6th, 1930? A. No, sir.

Q. Who put that writing on there? A. Mr. Downie.

Q. You did not put any of it on there? A. No, sir.

The Court: That is the one you received from your wife?

A. That is the one I received from my wife. Here is the envelope, with the stamps.

Q. As I understand it, then, you went down with Mr. Downie to Mr. Clutter's home twice? A. Yes, sir.

Q. About two or three weeks apart, and the second time was when the affidavit and this memorandum were taken down there? A. Yes, sir.

Q. Did you ever go with Mr. Downie at any other time to see Mr. Clutter? A. We saw Mr. Clutter one time when it was up about taking or repossessing his machine.

The Court: That was after this incident?

A. Yes, sir.

The Court: Mr. Williams is asking about before that time.

Mr. Williams: I am just trying to find out if there were any other time. He said the third time is when he went and talked about repossessing the machine. Just about how long was that after your first and second visits to him? A. That was in either 1927 or 1928.

Q. Did Mr. Clutter keep a copy of the affidavit that he signed, or did you have only the one copy? A. I don't recall of Mr. Clutter having one of them.

Q. You said that there was some discussion as to whether Clutter would sign this, or should sign this agreement or not. What was that discussion? What was said by either side, anybody there? A. Well as to the—

Q. Whether he would sign it, why he would sign it, or why he would not sign it? A. Mr. Clutter signed the affidavit that he had abandoned the experiment, and he said he thought that was sufficient for to show that he abandoned the experiment.

Q. Did Mr. Downie ask him to sign the memorandum? A. We talked that over between us; and Mr. Clutter said, "Here" he says, "I will give this one to Elmire to hold, and we can see it at any time."

Q. He did not say that about the affidavit? A. No, sir.

Q. Apparently he was not concerned about that? A. He was not concerned about it.

Q. Yes. A. He signed the affidavit to show that he abandoned the experiment.

Q. And he apparently was not concerned at all about this memorandum, either signing it or having a copy of it? A. He does not appear to, when he gave me his copy.

Q. So, of the only two copies there were of the memorandum, you got one copy and Mr. Downie got the other copy? A. That is all I know of.

Q. And neither copy was signed by anybody? A. No, sir.

Q. You think, then, from his actions, that Clutter did not consider the contract of any importance or value to him? A. I could not say.

Q. Did he indicate that he was reluctant to give it up or to give it to you? A. What is that?

Q. Did you have to persuade him to give it to you, argue the matter with him? A. No, sir, he gave it to me on his own free will.

Q. You were at that time in the employment of the Keystone Driller Company? A. Yes, sir.

Q. And had been for some years? A. Yes, sir.

Q. And still are? A. Yes, sir.

Q. Did you regard it as an important document? A. No more than if Mr. Clutter wanted to see it or Mr. Downie; I would like—well—I don't know—referee.

The Court: Stake holder?

A. A stake holder.

Q. You thought it was important enough to keep in a safety deposit vault? A. I keep all of my papers there.

Q. All of your important papers? A. All of them that pertains to anything at all.

Q. Tell us some of the papers you have there, just to see what they are?

Mr. May: That is immaterial.

The Court: If he does not care about it, all right.

A. I have the deed to my house, the bill of sale for my automobile, insurance.

The Court: Your will; did you ever make a will?

A. No, sir. When the Mrs. goes away for a couple of months, she just gathers up everything and takes it up there and puts it in.

Q. Does she take the kitchen stove? A. No, sir, she does not take the kitchen stove.

Q. But most everything else. A. No, sir. I mean silver ware and the like of that.

Q. How big is your safety deposit vault? A. It is about that long.

Q. About two and one-half feet long, and how wide? A. About so wide. (indicating)

Q. 18 inches wide? A. No, sir.

Q. 12 inches? A. About 10 or 12 inches.

Q. And how deep? A. The size of 8 inches or so.

Q. That you have as your personal private box? A. Yes, for either the Mrs. or I.

The Court: She has access to it the same as you do?

A. Yes, sir.

Q. You kept there the deed to your house, bill of sale for your automobile, and when your wife went away you had to put the family silver ware there; what else did you keep in that box, besides this paper? A. I have some stocks and the like of that.

Q. You apparently thought this was a fairly important document, as far as you were concerned? A. If anybody trusts me with anything, I will take good care of it.

Q. You said you were a referee, a sort of referee between these two men.

The Court: Change that to stake holder.

Mr. Williams: He said referee. The court said stake holder. I want to get his notion.

Q. You said you were referee between these men: What was the fight, what was there to referee? A. There was no fight. What I meant by refereeing—when Mr. Clutter says, "Here, you take that; I will trust Elmire."

Q. If he did not sign it and Downie did not sign it, what was he trusting you for? A. I don't know.

Q. I would like to know what you were going to referee? What was the trouble or dispute you were going to referee between these men? A. I was not going to referee anything.

Q. So you were going to be a referee without refereeing anything? A. I just used that term, "refereeing." Mr. Clutter handed this over to me and said he would trust me with it and that he could have access to see it any time he wished to.

Q. You said before I believe that Downie also could see it if he wanted to? A. Yes, sir.

Q. What was the purpose of Downie seeing it? He kept a copy? A. Yes, sir.

Q. Why did he want to see this one? Was there any particular virtue about this one that there was not about his copy? A. No, sir. They were both the same.

Q. The fact was, was it not, that Downie did not want you to have a copy of this thing? A. No, sir.

Q. Why did you let him keep a copy of it then? A. Downie gave it to Clutter.

Q. And Clutter gave it to you? A. Yes, sir.

Q. How was it they finally decided they would not sign that agreement? What was the argument used that they would not sign it? A. I stated a little while ago that as to the reason that this was not signed.

Q. I have forgotten. Tell me again. I do not seem to have remembered. Why was it they did not sign it, or what was said about it why they did not sign it? A. Clutter stated that he thought the affidavit was not enough to show that he abandoned the experiment.

Q. That is the only thing Clutter was interested in apparently as you understand it? A. That is the only thing.

Q. In this whole deal, Clutter was only interested in saying that he abandoned the experiment? A. He said he abandoned it.

Q. Apparently you think that is the only thing Clutter was interested in in making that statement; that he was not interested in anything else in this deal, is that right? A. That he was interested in anything else before making the statement?

Q. That is all he was interested in? A. He made the affidavit.

Q. That is all he was interested in in making that affidavit and giving it to you or to Downie? A. He signed and swore to it in front of a notary and turned it over to Downie.

Q. So far as you know, that is the only thing Clutter was interested in doing, making that statement so that Downie could have it? A. I could not vouch as to what Mr. Clutter had in mind at the time.

Q. What did Downie say as to whether Clutter should sign this memorandum agreement? A. As I stated, it was talked over. We talked it over and agreed that he did not need to sign it.

The Court: Just repeat the conversation just as closely as you can remember.

A. Mr. Clutter stated—

The Court: First, where was the conversation?

A. As to the memorandum?

The Court: As to signing the memorandum, yes.

A. In Lakewood, New Jersey.

The Court: That was not in the presence of the notary?

A. That was not in the presence of the notary.

The Court: All right.

Q. So the conversation was had at Lakewood before you went down to get the notary?

The Court: Had the affidavit been signed at the time of this conversation about the signing of the memorandum?

A. Yes, sir.

The Court: All right, go ahead.

Q. Tell what was said. Not what you agreed. What you said. Downie said and what Clutter said. A. I don't remember everything that was said.

Q. Tell us something that was said. You seem to have a pretty clear memory in some respects. Tell us anything that was said. A. We come up to Lakewood and went into the restaurant and ate.

Q. I mean what was said.

The Court: Was that conversation in the restaurant?

A. Some of it was in the restaurant, and then we come outside on the sidewalk, and was talking outside the restaurant.

The Court: All right.

Q. What was said then? What did Downie say? What did you say? What did Clutter say about signing this memorandum? A. We talked the thing over and Mr. Clutter said that he did not think it needed to be signed; that the affidavit showed that he abandoned the experiment.

Q. You told us that four times. You said you talked it over and he said that. Now in talking it over, what did somebody else say? What did Downie say?

The Court: First, let us get this: At the notary's, at the time he signed the affidavit in the presence of the notary public, was anything said about the memorandum at that place?

A. No, sir.

The Court: It was not mentioned there?

A. No, sir.

The Court: When was the memorandum first mentioned? When you got back to the restaurant or before that?

A. I don't recall.

The Court: How did you go to the restaurant, in an automobile together?

A. Yes, sir.

The Court: Do you remember whether there was any conversation in the automobile about the signing of the memorandum, or was it when you got back to the restaurant? How do you recall it?

A. I cannot recall if there was anything stated about the memorandum, before we got into the restaurant to eat.

The Court: And then what happened? Did Downie pull it out of his pocket, or what happened?

A. They talked about it, and Mr. Downie got it out of his pocket.

The Court: Before or after they talked about it?

A. After they was talking about it.

Q. Let me get straight on some of this timing. As I remember it or understand it, you first went to Lakewood to Clutter's home; talked there a while; and then got in an automobile and went down to the job on Tom's River.

The Court: This is the second trip.

Q. I want the trip at which these papers were discussed and one of them signed. A. The second trip, we went down and we met Mr. Clutter at Lawrence Harbor where he was doing a job; and from there we went on down to the job below Lakewood where he had to go down there to see something about the work.

The Court: Whose automobile?

A. He had another job.

The Court: Whose automobile?

A. He was in his car, and we went in our car going down; and if I recall, he left his car down on the lower job. He had his brother down there operating a Keystone Machine, and he was going to fetch it home. He came along with us in our car, as near as I can recall that.

Q. Where was that you met him now? A. Lawrence Harbor.

Q. You met him at Lawrence Harbor and talked there a while, and then went from there where? A. Down to the job below Lakewood.

Q. How far was that, ten miles or so from Lawrence Harbor? A. No, sir, I would say that is about thirty miles or so.

Q. Did you go together or did he go in his machine and you in yours? A. When he left Lawrence Harbor he went in his.

Q. You and Downie went together and he went in his machine alone? A. Yes, sir.

Q. And then from the place near Lakewood, you say some thirty miles away, then where did you go? A. We went down on the job.

The Court: What time of the day?

Q. You went to Lawrence Harbor: What time did you get there? A. Some time in the early afternoon.

Q. And then you talked there a while and drove down near Lakewood, you say some thirty miles away: When did you get there? A. I don't know the exact time.

Q. Half hour, hour, two hours? A. It might have been say, around, somewhere—well it was somewheres between three and four o'clock or so.

Q. And then you went from there where, to the lower job, where was it? A. The lower job we arrived at that time.

Q. Where did you go from there? A. Then we came back to Tom's River.

The Court: How far was that?

A. About eight or ten miles.

Q. When did you get there, about when? A. About somewheres between five and six o'clock.

Q. How long were you there? You had dinner there? A. No, sir.

The Court: They had the notary there?

Q. Oh, that is where you struck the notary? A. Yes, sir.

Q. In the trip, as I understand you, from Lakewood up to Tom's River, and from there on, you three were together in your machine; you said Clutter left his machine on one of those jobs with his brother? A. Yes, sir. As near as I can recall he left it there for his brother to fetch home.

Q. And he then came with you up to Tom's River where you got the notary: About what time did you leave the notary's? A. Well, we were there between five and six.

Q. Then where did you go? A. Lakewood.

Q. What time did you get up there? A. Somewheres after six o'clock.

Q. And there you had dinner? A. Yes, sir.

Q. And when did you separate? About how long were you together? A. It must have been close on to ten o'clock when we separated.

Q. And then you and Downie left? A. And went up to Arlington, New Jersey.

Q. You left Clutter there. Now, then, as I understand you, when you first met Clutter at Lawrence Harbor early in the afternoon, then you talked with him about the affidavit; is that when you talked to him about the affidavit, whether he would sign it? Did you show it to him then? A. I did not have the affidavit.

Q. Who had it? A. Mr. Downie.

Q. Did Downie talk about it or tell him about it? A. Mr. Downie and him was talking about it.

Q. Did you hear what was said? A. Some of it, yes.

Q. What did they say about it? A. Downie said he had the affidavit for Mr. Clutter to sign; that he had agreed to sign when Mr. Downie was down there on the trip before.

Q. Did he show Clutter the affidavit then? A. Yes, sir, Mr. Clutter read the affidavit.

Q. And said he would sign it? A. He signed it in front of the—

Q. Well, as I understood it, he first saw it at Lawrence Harbor early in the afternoon, some thirty miles away from Tom's River? A. You understand he seen it at Lawrence?

Q. Lawrence Harbor, where you first met him? A. We first met him there.

Q. Did you show it to him there? A. I would not say if he saw it there or not. Mr. Clutter was somewhat excited at the time we arrived there. He said there was a fellow hit with an automobile on the job. I would not say if he saw it right there or not.

Q. Do you know what he took this thirty mile drive all by himself for down to Tom's River? A. He did not go to Tom's River.

Q. Where did he go? A. He went down to his lower job.

Q. Where did he meet you again then? A. We went down, the two cars together.

Q. And then from there you went then to Tom's River? A. Yes, sir.

Q. It was on that lower job he left his machine and you went together from there on? A. Yes, sir, as near as I can recall as to the machines.

Q. When did Clutter first see that affidavit? What time during this day? He did not see it until he signed it? A. Yes, sir, he saw it before he signed it.

Q. Where and when? A. I could not say if it was Lawrence Harbor or on the lower job.

The Court: Did Mr. Downie and you tell him what you came there for when you came there?

A. Mr. Downie did the talking to him. I done very little talking. I had not much to say about it.

The Court: Mr. Downie told him he had the papers prepared to sign?

A. Yes, sir.

The Court: At the first place you met him?

A. I could not say if it was at the first place or not.

(Night adjournment.)

March 13, 1931, 9:30 a. m.

CROSS EXAMINATION of Witness HOWARD H. ELMIRE resumed by Mr. Williams:

Q. Mr. Elmire, I believe you said in your direct examination that you saw Mr. Green undercutting with an excavator? A. Yes, sir.

Q. What kind of an excavator was it he was using? A. Keystone; ditcher.

Q. That is, an instroke ditcher? A. Yes, sir.

Q. And just where was it that you saw him? A. In the Bronx, in New York City.

Q. What model machine of the Keystone ditcher was it? A. Model 4.

Q. You say it was in the Bronx; whereabouts in the Bronx? A. Well, now, I have seen Mr. Green work at dozens of different places in the Bronx.

Q. Well, but tell us the particular place where you saw him using this Keystone excavator, doing undercutting work? A. I couldn't tell you the particular place.

Q. You can't tell us where? A. No, sir.

Q. Well, when was it? When was it you saw him undercutting? A. I saw him—well, say from around 1920, '21, '22.

Q. Some time in the three years that you saw him? A. Yes.

Q. Well, can't you tell me more definitely when it was? A. No, sir.

Q. Can't you tell me more definitely where it was? A. No more than in the Bronx.

Q. By the Bronx, you mean the upper part of New York City, north of the Harlem River? A. Yes, sir.

Q. Well, now, what sort of work was he doing? Trench work? A. Trench work.

Q. How deep was the trench? A. Well, I saw Mr. Green working on different depths, up to 18 feet.

Q. Well, now, I am talking about this undercutting; how deep was the trench where he was undercutting? A. I saw him undercutting on—well, various depths.

Q. What depths? A. Well, I would say maybe some of them was 6, some of them was 8, 10, and the like of that.

Q. You say, maybe some of them was? A. Yes.

Q. Well, do you remember any specific case now of any particular depth at which he was undercutting? A. I remember of several different places, but I couldn't say as to the location.

Q. Well, you say you remember several different places; now tell me just one of them. A. Well, I couldn't tell you.

Q. Well, how wide was the trench you saw him digging when he was undercutting? A. Well, they run 30, 36 inches, and some of them 42.

Q. And do you mean to tell the court that you saw him undercutting at various times and at various widths of trenches and at various depths? A. Yes, sir.

Q. Now, what was that undercutting? A. Why, you take when you are cutting a curve—

Q. No, I am asking you what was he undercutting? A. He was undercutting on rocks, boulders that would stick out into the trench, say a foot or so, and on passing of poles, if you had to throw your machine out of line.

Q. No, I am not talking generally; I am asking you to tell me what particular place, the particular boulders, or size of the boulder that he undercut? A. Well, I couldn't tell you as to the size of the boulder. The end of it would just stick out into the trench, and you wouldn't know how far it went back.

Q. And how deep was that boulder in the ground that you saw him undercutting? A. How deep which way?

Q. Below the surface of the ground; how deep was that boulder below the surface of the ground? A. Well, I have seen him on several ones; I couldn't say just specifically as to how deep it was.

Q. Can't tell me any particular one; can't locate it now? A. I couldn't tell you just the depth of it.

Q. What was the character of the soil in which he was undercutting? A. It was hard soil, with boulders in it.

Q. How big were the boulders? A. All sizes.

Q. All sizes? From what size up to what size? A. Well, you might find some not bigger than the end of your thumb, and you might find—

Q. I am not asking what you might find. I am asking you what you saw? A. Well, that is what I am trying to tell you.

Q. Well, I am asking you what you saw him undercutting, what the character of the soil was. A. And you asked how large the boulders was.

Q. Yes, that you saw him working at? A. And I said they was all sizes of boulders in this here soil.

Q. And how big were some of the boulders? A. Some of them was as big as your trench, as to the width you would cut out; that was in the soil, some of them would stick out in the trench from the side like that, and you get down by them and lift your stick over, got by, and then out in under them, and then go on down, and they would lay the pipe under.

Q. You are talking about the way you would do the work, and the way you were in the habit of doing it. A. The way it is done, and the way I have saw Mr. Green do it.

Q. Well, what was the largest boulder you saw him undercutting? A. I couldn't say.

Q. How deep was the trench in the largest, with respect to the largest boulder that you saw him undercut? A. I said, various depths.

Q. I am talking about the larger boulders now you saw him undercut. What kind of a trench was that? How deep? A. I couldn't say as to the largest boulder I saw him undercut.

Q. I see. Well, then, how wide was the trench when he was undercutting the largest boulders that you saw him undercut? A. It run from 32 to 42 inch.

Q. That is, that particular boulder, the largest you saw? A. No, the width of the trench.

Q. Oh, it run from 32 to 42 inches. Now, where was that trench? A. In the Bronx.

Q. Whereabouts in the Bronx? A. I said before, I couldn't give the location, for I saw Mr. Green working around over the Bronx.

Q. Well, now will you tell us just what is the operation of undercutting, as you understand it? How is it done? A. How the undercutting is done?

Q. Yes. A. Well, if you hit a boulder or niggerhead—some call them niggerheads—and it projects out the side of the ditch, into your ditch, for say 6, 8, 10 inches, 12 inches or more, and you have got to go on down, and you dig around that boulder and go down under it, and the boulder is projecting out of your trench when you finish it, out in your trench; and on cutting a ditch on a curve when you have your machine, your boom and scoop is straight out ahead of you, and have to get the radius of your ditch, you lay your stick over to cut about whatever radius you want, and just keep moving around on your curve.

Q. Now, you say you lay the stick over; how do you do that? A. Lay it over with the power of the machine.

Q. That is, you rotate your machine, and bend or twist the stick over? A. Not on the Model 4, no, sir.

Q. I mean, you swing the boom around and throw the stick out of the perpendicular; is that right? A. You swing what we call the hog rods.

Q. What are they? A. They are two rods fastened on to a swing circle in the top, where you swing your boom up. This is on the Model 4 Keystone excavator, and your boom is straight out, you swing your hog rods off to what angle you want, and your hoisting line of your boom, that hoists your boom, is anchored on these hog rods. Then you apply the necessary power onto the haul line or pulling your boom level with the hog rod here, and you pull on a slant and you tip your boom over.

Q. Well, do you mean that with the hog rod you twist the boom itself? A. With the cable that is anchored to the hog rod.

Q. You twist the boom? A. You twist the boom over.

Q. You twist that big heavy iron channel member—twist that so that it throws the stick out of perpendicular? A. Yes, sir.

Q. How much experience have you had in actually running these machines that do this undercutting work? A. I have, went on in the fall of 1917.

Q. Well, how much did you operate them? A. I operated until February 1, 1922, steady, and from that on, off and on right along.

Q. By operating, you mean you were the engineer actually operating the machine, the mechanism? A. Yes, sir.

Q. How were you working, by the day on a job, or just demonstrating machines? A. I was demonstrating.

Q. That is, after 1917? A. After 1917.

Q. You were not working at any commercial operations, then; you were just demonstrating it for sale? A. I went out and worked some for contractors when they was short of an engineer.

Q. And during that time you were employed by the Keystone Co.? A. Yes, sir.

Q. And they simply loaned you to a contractor at the time? A. Loaned me out, if one of the customers had no engineer and I wasn't busy, why they would put me to work.

Q. Well, now just tell us step by step the operation, or the steps of the operation, in cutting down past by this boulder that you spoke of that you could get around the trench by undercutting? Just tell us in detail what you did and what operations you performed.

Mr. Richey: It seems to me he has just answered that. How many times do you want this?

Mr. Williams: Well, I may be pretty dumb, but I didn't get it very clearly.

The Court: I think he has described it pretty well, but he might answer this, only in the interest of time—if you want to go on, you go on.

Mr. Williams: Just this one question, if he will answer it.

The Court: All right.

(Last question read)

A. Well, you dig down, and if you hit a boulder that is sticking out into the trench, say for 10, 12 inches, or 8 inches, and it is too big to pull out, and it extends back into the side, you lean your stick over and go down and slide your bucket around the point of the boulder, and when you get down by, you straighten up your stick and go on and lift your boulder, and it is up here projecting out here in the ditch. Now, if it is clear over the ditch, why you can't do it.

Mr. Williams: That is all.

RE-DIRECT EXAMINATION by Mr. Edgerton.

Q. Did you see the exhibition of the moving pictures last evening, taken by Mr. Sessions and exhibited here? A. Yes, sir.

Q. That is, Exhibit 49?

Mr. Corbett: This is new matter. Was this raised on direct?

Mr. Edgerton: I don't believe the picture was.

Mr. Corbett: Well, we don't want to be unduly technical, but this matter was not raised on direct.

The Court: Well, that would be a good objection. What do you want him to do?

Mr. Edgerton: I just asked him if he had seen excavations of that type before.

The Court: All right, ask him that direct question then.

Q. Is that picture you witnessed typical of the excavations you have seen?

The Court: Well, have you seen some like that before?

The Witness: Yes, sir.

Q. Will you look at the scoop shown in the Clutter patent, 1,107,899, and state whether or not the Keystone Driller Company has made and sold a scoop like that shown in the drawing with respect to the latch? A. I would like to see that.

Mr. Edgerton: That is Defendant's Exhibit 25. (Exhibit shown to witness)

A. No, sir; not to my knowledge.

Q. I now hand you Plaintiff's Exhibits P-54, 55, 56, 57, and 53, and ask you whether these photographs illustrate material which is typical of the type of work you have observed as done by the Keystone Driller Company's machine? A. Yes, sir.

Mr. Edgerton: That is all.

RE-CROSS EXAMINATION by Mr. Corbett.

Q. Prior to 1920, the Keystone Driller Company was selling skimmer scoops with drop bottoms; isn't that correct? A. Yes, sir.

Q. And those drop bottoms are substantially like that structure you see in that patent; isn't that right? A. Some of them.

Q. Some of them? A. Yes, sir.

Mr. Williams: We offer in evidence as Defendant's Exhibit 114, the original of the memorandum agreement unsigned between Clutter and the Keystone Driller Company, being the original of which Exhibit 98 is a carbon copy.

The Court: Any objection.
Mr. Edgerton: No.

Thereupon the plaintiff, further to maintain the issues upon its part, called as a witness in its behalf in rebuttal:

Rex R. Downie, recalled as a witness by plaintiff, further testified as follows:

Direct Examination by Mr. Richey.

Q. Mr. Downie, during your testimony in this case, defendant's counsel asked you if you could find any catalogs of your company which said anything about the rock digging of the plaintiff's machine. At that time you said that you couldn't find any here in Toledo that you had with you. Have you since found any? A. I have located references to digging hard and shale and rocky materials, at some points in the catalogs.

Q. Will you produce the ones you found?

Mr. Richey: I will ask that they be given the next three numbers, Exhibits P-58, 59 and 60.

Q. I now hand you three leaflets or catalogs, marked Exhibits P-58, P-59 and P-60. If those are the ones, will you so indicate, and call attention to the parts which refer to digging in the hard material?

The Court: The places are underscored, are they?
Mr. Richey: You might underscore the parts.

A. I will do that. I underscore on Exhibit 58 the matter in the upper right hand corner, the legend appearing beneath a view of the ditcher loading into a truck.

Mr. Corbett: Have you given the page?
The Witness: I did not. The pages are not numbered, but it is the final, that is, fourth page of the folder—

Q. Marked P-58? A. Marked Exhibit P-58. On Exhibit P-59, I have underscored the words at the left hand lower legend, "when the ditch runs into boulders,

slate, shale, water, ice," etc. Likewise on Exhibit 60, I have underscored, "dirt, clay, gravel, boulders, shale, blasted rock."

Q. When were each of these catalogs issued? A. The first, Exhibit 58, is dated May 1, 1923. The second, Exhibit 59, I am unable to date exactly. I remember both of the views here shown, and would therefore place it as being issued not earlier than 1921, and as being one of the series issued between 1921 and 1926. Exhibit 60 is not dated, but from the views of the machine I place it as issued in 1926 or '27. I see that this Exhibit is directed principally to advertising the Model 4-27, so that I feel sure that it was issued in that year, 1927.

Q. Have you since you were asked to produce catalogs with such remarks in, looked over the catalogs which are exhibits in this case, and found similar remarks? To save time, I will direct your attention to page 33 of Exhibit P-18. A. Yes, sir.

Q. And will you mark that, and state what it is you found on this exhibit? A. I did locate on further examination, in Exhibit P-18, matter referring to the performance of the ditcher, on page 23, second column—

Q. 33, isn't it? A. 33, yes—and I am underscoring, beginning at about the seventh or eighth line, the language, "The ditcher scoops can be operated in any material that can be dug mechanically. The presence of frosted ground will be no impediment. While we do not claim for the machine that it will dig hardrock, it is a fact that it will handle slates and shales between depths of four feet and ten feet, without blasting."

Q. And it further reads, "And hard surface strata, if underlaid with soft ground?" A. That is correct.

Q. Now, the same remarks are to be found at page 43 of Plaintiff's Exhibit P-20; that is correct, isn't it? A. Yes, sir. This is the same text.

Q. These catalogs were issued in 1921 and 1925, weren't they? A. That is correct.

Q. Something has been suggested here about the claimed inability of the Clutter machine to reach out with the stick extending directly out from the boom. Do you find any illustrations of that in any of these catalogs you have produced here? A. Yes, sir; in Exhibit P-58.

Q. And as a matter of fact, have you ever seen any of the Clutter machines in that position? A. Yes, sir; many times.

Q. Operating? A. Operating.

Q. You can illustrate that in this model of the Clutter machine, Exhibit P-15, can't you? A. Yes, sir.

Mr. Richey: Do you want to do it?

Mr. Corbett: You make your case to suit yourself. I don't want you to have me tell you how.

Q. There was some controversy here about the machine of the Webber patent, which was in the Cleveland case, and the machine of the King patent, and also in connection with the machines of those two patents said to have been used in a limited way commercially. Will you look at the Webber patents 528,312, 557,359, and the King patent 579,589, and machines illustrated in the Defendant's Exhibits 21 and 22, and 54 and 55, and compare these machines in mode of operation and results? And you also might point out any mechanical differences and see whether or not they are material as affecting the operation or results? You have copies of those patents, haven't you, Mr. Downie? A. I have no copies of them here.

Mr. Richey: Well, give him copies of them, will you, somebody?

The Witness: Does your present question refer only to Defendant's Exhibits 22, 21 and 55, or does it include the patents which you have named?

Mr. Richey: It includes the patents I have named.

The Witness: Will you give me a list of those numbers?

Mr. Richey: Yes, sir. I think there were some charts here used, on those Webber and King patents. Can we have those, Mr. Corbett?

Mr. Corbett: What is that?

Mr. Richey: The charts you had of the Webber and King patent machines.

Mr. Corbett: We have all the charts here, I believe, that were used; the chart was just an enlargement of the machine.

Mr. Richey: Well, that is what I mean, enlargements of them.

Mr. Corbett: What number of King was that?

Mr. Richey: Well, all the King patents and all the Webber patents.

(Chart of King patent, and chart of one of Webber patents produced.)

Q. I will add to that list of things we asked you to consider, the machine shown in Exhibit 23, which I understand is defendant's duplication. A. All of the machines referred to in your question, including the defendant's Exhibit 23, are of the same general type, in that they have a boom of fixed elevation and reciprocating dipper stick, carried at the outer end of the boom, reversing mechanisms for the reciprocation of the dipper stick or handle, a scoop carried at the lower end of the stick, a variously termed digging line and hoisting line attached to the scoop and extending upwardly to a high point in the fixed boom structure.

All of them are limited in that they operate substantially only through the one quadrant, that is, from plumb position up to ground level. They are all inward stroke machines; they are all hand-dumped buckets; they all discharge with the stick in horizontal position, and the end of the bucket presented downwardly. That summarizes their operation, I believe, as a class.

Q. Now, will you compare these machines, and operations, and advantages and disadvantages; with the machine of the Clutter patent in suit? A. The principal distinction between this type of class of machine, and it may be stated, with reference to each of the machines which you have named as representative of the type, is that these machines have the equivalent of three power members for their operation, in that the dipper stick or ditcher stick is reciprocable at the end of the boom and requires a power application in each direction, upwardly for overcoming the weight of the scoop and to exert a lift upon the material being excavated in regulating the gauge or bite of the scoop, and downwardly, in order to force engagement, and each has the digging line referred to as "M" in the chart here, Defendant's Chart No. 3, G. W. King, No. 579,589, whereas in the machine in the Clutter patent there are but two power actuated lines for doing the analogous duty of elevating the scoop, lowering it, hauling it machinewardly and repositioning it in the opposite direction, in both the digging and discharging phases of operation.

A second distinction in this class from the Clutter machine is that none of these machines can be used for the delivery of a gravity blow, either a simple gravity blow, or a power-sharpened or accentuated blow, such as Clutter applies, and this is because these machines have no means other than momentum of the scoop and

stick for carrying the scoop and stick out to the horizontal or initial position required for delivery of a downward blow, or for controlling the position of the scoop if swung to that position.

I do not observe, in glancing over the illustration, photos, drawings of these machines, any indication of capacity for single width excavation. There is one photo, Defendant's Exhibit No. 22, which might or might not, so far as the photograph shows, indicate a machine working at single width. The others are not made suitably for this work, having for the most part bails outside of the scoop shell, and without clearance producing structure. I am comparing only with the Clutter machine?

Q. That is correct. A. Yes, sir.

(Narrative continued.) These machines have a stationary boom, that is, a boom which is stationary in the vertical plane. That is also a distinction, not only of Clutter, but from all of the rest of the patents in suit. That completes my summary of this class of machines. Some of these machines are said to have been used in digging what is known as South Carolina bone or phosphate rock. I have read a little in regard to it, from a textbook on industrial chemistry of the Carolinas, I do not have the author's name. I believe the name was Thorpe.

Mr. Richey: That probably is incompetent, except from an expert, I think, will help the court to summarize.

Q. What did you find in that book to be the nature of that?

Mr. Corbett: Your Honor, we object to that. The book is the best evidence of that.

The Court: Yes, I think so.

Mr. Richey: All right.

Q. I understood defendant's expert, Mr. Turner, to say that he considered the Rood patent, No. 386,438, to illustrate and describe a machine which was nearer like the machine of the Clutter patent in suit than any of the others he discussed. Will you next take up the machine of this Rood patent, and compare it in structure, mode of operation, and results, with the machine of the Clutter patent?

The Court: Do you have one of those charts for that?

Mr. Richey: Yes. (Presents Chart 1.)

A. The machine to which you refer, E. O. Rood, 386,438, was a dual machine; that is, it was a machine carrying two booms, two ditcher sticks and two sticks, one of which is illustrated in the chart 1 of defendant. May I ask, Mr. Richey, whether the operation of the machine as testified by Mr. C. W. Rood is admissible in the explanation of its functioning, or only that of the patent?

Mr. Corbett: Your Honor, we think he ought to either testify from the patent or his own knowledge about this matter.

The Witness: I will confine myself to the patent operations.

The Court: Very well.

A. (Continuing.) There is a boom, a stick member 13 in this chart, a scoop "b", a line 16-18 connected with the upper end of the stick and passing under a deflector sheave carried in the boom and extending upwardly to the point of the frame of the machine; another line extending from the scoop, to which it is attached with a hauling bail, this line being marked 22, 23, which is the same cable, the first section being a chain, the second section being wire or other rope, and extending upwardly over a high sheave in the frame and then to the winding mechanism. The line 23 referred to as the haul hoist line is carried a little to one side in its traverse of a sheave in the frame of the machine, and thus exerts, in operation, a sidewise effort upon the boom, and so swung the boom laterally for discharge. Each boom was swung to one side or the other; that is to say, the right hand boom was swung outwardly to the right, and the left hand boom to the left, or by an arrangement of a skid or guide structure marked 4 in the patent—(not marked in this diagram), the booms could be made to operate toward a medial or median discharge area as located between two parallel ditches, or could be made to discharge at both sides of a common relatively wider ditch. The function of the line 23 was to haul the scoop through the material, and after the scoop engaged the boom to elevate the boom, the scoop and stick; thus it performed both the hauling and hoisting functions—a major distinction.

During the hauling of the scoop through the material, due to the relatively great elevation of the line 23 as required for its other duty, that of hoisting, it incidentally during hauling exerted quite a lift upon the

boom, and that called for an additional element of control or positioning means for the boom, a spar marked "c" in the patent and in the diagram. This spar operated through a guide, a clamping guide, at the upper end of the front frame of the machine, and when the boom was lowered to the desired elevation for digging, the spar was gripped by means of these clamps as controlled by a rod extending down the front frame of the machine and brought to the hand of one of the operators. The spar then prevented the boom from either falling too low, as in case the scoop would tend to bite itself into too deep engagement, or to rise in case the resistance of the scoop—the resistance encountered by the scoop would cause the boom to lift or in case the effort of the hauling line would lift it. So the scoop passed across through the material in one prefixed relatively unchanging path from the time that the boom was fixed in its position until the time that the scoop struck the boom. This we call the inelection of the Rood machine as compared with the Clutter machine. As I say, when the scoop struck the boom, the operator promptly released the spar grips and the continued winding of the haul hoist line 23 elevated the structure, and due to this sidewise draft upon it, skidded it up along the guides to discharge position, at which point the grip stick or spar "c" was again gripped and the engines were then reversed, and as the other half of the machine started into its digging stroke, this one half of the machine, whose operation we are following, began its discharging sweep of the stick, due to the unwinding upon the dump line 16.

As I say, the other scoop meanwhile traversing its digging path and gathering its load. The one boom having discharged its load from its scoop, was then allowed, under the snubbing of the dump line 16 to slid back down the guides along a fixed path to a position of elevation, in regard to which the operator had made election; that is, for deeper ditches the operator adjusted the base of his boom by means of a worm and nut arrangement with a small hand wheel, so that the boom, riding over the guide as a fulcrum, or the horizontal portion of the guide on the floor of the machine as a fulcrum, could be raised or lowered some slight distance at the outer end. But assuming the adjustment to remain constant, the operator merely allowed the boom to slide down onto the horizontal portion of the guide and again clamped his spar, the engines were now reversed, and

as the other boom in the air began its discharging sweep, the scoop which we are following began its loading sweep at the elevation fixed by the spar. That completes a cycle of operation.

The major distinction in utility between this machine and that of Mr. Clutter is the functionalization of the lines. Mr. Clutter has a hoisting line usable at any instant in operation for the purpose of hoisting or lowering the boom and scoop, and a hauling line usable at any instant for hauling the scoop or allowing it to run out.

In the Rood machine, the upper line is not a hoisting line, but was used only for dumping the stick; the lower line is a hauling line, and is also a hoisting line, and was called the haul hoist. The spar or stick "c" of Rood has no analog in the Clutter structure, since the boom in that machine delivered its own weight upon the scoop, hauling line power being delivered by the special hauling line which did not tend to lift the boom.

The Rood machine is apparently not used for single width excavation; not usable for striking the gravity blow, since the sharp gravity action of the one scoop would involve a corresponding sharp upwardly action of the other scoop, the two being always in opposition, and the lifting of the scoop in the air would of course deaden, if not prevent, the sharp falling of the scoop used for striking a blow.

As mentioned previously, the operator of the Rood machine has little or no election in the travel, in the hauling of his scoop toward the boom. Of course, the engines could be stopped in case an obstruction was encountered and foreseen far enough to permit that operation; but in general the operation of the machine was a transverse and fixed inexorable path of the scoop.

The equipment in the power plant, including the drums, etc., of the Rood patent is such that it would not permit any other kind of operation other than I have described, except that there might be a variation in the procedure at the upper or discharging point of the cycle; that is, as to whether the spar "c" would be clamped and the bucket overturned by an inwinding of the bottom line at one elevation of the boom, or whether the bottom line could be nearly snubbed, and the engines reversed at the beginning of the sweep, and the boom allowed to start its downward coast, and in such coasting cause a relative inwinding of the bottom line. Aside from this one detail, the operation is fixed.

It is not possible to arrange the drums and power plant to operate this machine the way Mr. Turner said it might be operated, because the one boom set against the other boom would have its reverse directions, and since weight, as one element here—that is, the weight of the scoop as in striking a gravity blow, would be in some sense in opposition to the other half of the machine, that effort would be futile.

The drums and clamps also were such that you could not operate it in any other manner than that. To do it you would have to rearrange the entire power plant, and the transmission mechanism, likewise the lines and the booms and method of support, as well as the stick and scoop structure.

Q. Now, he said something about leaving off the spar and putting on a bottom line, I think it was. Would that make a change in the operation? A. That happened in the deposition, Mr. Richey.

Mr. Richey: I know, but Mr. Turner testified to that. That is in this case, that much about that.

Mr. Corbett: I object to what he says was in the deposition.

Q. Well, assuming the spar is left off, and the bottom line is put on instead, would that change the operation any? A. It would change it in just this way, that the bottom line, that is, a line connected to the boom and to a point upon the frame for preventing the boom from falling more than so far, had to be adjusted from time to time instead of the spar being clamped from time to time. But I would not say that that was a material modification toward any real election in the operation of the machine.

Mr. Richey: I would say, Your Honor, that in the Cleveland case there was some depositions relative to this use, the variation made in it, and the other side asked us if we would stipulate them in this case, and we told them we would, and we were rather surprised yesterday when they were not stipulated in.

Mr. Corbett: Just simply because we found more important matter, is all. Nothing surprising about that.

Q. Had you finished your discussion?

Mr. Corbett: We object to this witness stating what was present in the deposition in that case.

Mr. Richey: He has not stated it.

The Witness: That summarizes my comment, the deficiency of inability to strike a blow, inelection of the scoop travel.

Q. Will you now take up the various Mahoney machines, beginning with that shown in Defendant's Exhibit 4, and then that shown in Defendant's Exhibits 5 and 6, and then that shown in the Mahoney patent 1,194,204—

The Court: We will take a recess while you get those together.

(Recess.)

Q. (Continuing.) And then the one shown in Defendant's Exhibit 9, known as the Ledgerwood machine, and compare each of these in turn, in structure, mode of operation and results with the machine of the Clutter patent in suit?

The Court: Have you a chart of that here?

Mr. Richey: Yes, here is a chart of the Mahoney patent, and the large photographs of the machines Mr. Corbett is getting for us. This is Exhibit 4.

The Court: According to the testimony, this machine antedates yours, doesn't it?

Mr. Richey: Yes, sir; we claim that it was an abandoned experiment. And then we also claim it doesn't anticipate anyway, but it is prior to Clutter.

Mr. Corbett: One of those photographs is at the hotel, and I am sending over for it; in the meantime can he go ahead with this one?

Mr. Richey: Yes, and in the meantime I think we can use the small photographs, 5 and 6.

A. The first of the Mahoney machines was that of Defendant's Exhibit 4, and I will refer to the machine from an enlargement of that photograph. The mechanism of the Mahoney machine comprises the handling machine with suitable drums for operating the lines, a boom or leaning mast of fixed position, at the base of it pivotally mounted to elevate the boom, carrying at the end of the boom a ditcher stick which carries at its lower end a pivoted scoop. The boom extends somewhat beyond the point of pivotal attachment of the ditcher stick. The cables operating the device are a hoisting line extending in three parts from the leaning mast to the outer end of the boom, two of the parts coming over a sheave pivotally carried in the short link attached to the upper end of the ditcher stick which extends slightly above its point of attachment to the boom, the end part of the hoisting

being dead-ended directly to the outer end of the boom. This cable was used for elevating and lowering the entire digging portion of the structure.

The Court: That is, the boom and the stick both?

The Witness: The boom and scoop and stick and load.

There was a second line called a hauling or pulling line and extending over a sheave in the machine down through the leaning mast and through the boom to a bail upon the scoop, the bail being pivotally attached at a common axis with the lifting bail or yoke which connected the scoop to the ditcher stick. This cable was used for pulling the scoop towards the machine for filling. There was a third cable or line extending from the scoop up and about a sheave on the outer end of the boom through a slot in the mast or A-frame of the machine, and thence to a winch head upon the left hand side of the machine. This line, called the dump line, passed about a small pulley or sheave carried by a yoke pivotally attached to the rear end of the scoop, and having at its mid length an eye for the attachment of the pulley. The dump line is deadened at the point just in the rear of the sheave at the outer extremity of the boom, and the function of the dump line was three-fold, first, and from which function it takes its name, that of inverting the scoop at discharge for depositing spoil.

The Court: That is the dump line?

The Witness: That is the dump line, yes. The second function of the line was to assist in swinging the stick and scoop outwardly from the machine to the position of discharge. The third function was to regulate or adjust the tilt or angle of the scoop during its passage through the material, the manipulation of the dump line in this duty being in the hand of the left hand operator, and required a tautening or slackening of the line, as the case might be, on the constantly revolving winch head carried at the left hand end of what seems to be the main drum shaft of the handling machine. When the dump line tension was not needed, that is, as when the scoop was passing through the material at a satisfactory gauge or bite, the drum was allowed to revolve in the loosely wound dump line which apparently ordinarily had three or four turns about the drum.

The scoop was swung outwardly in part by the action of the two parts of the hoisting line, link attached to the

upper end of the ditcher stick; the length of this upper arm or extension of the stick is not exactly known, but would be in the neighborhood of 5 or 6 inches. The action of the two parts of the hoisting line and the action of the dump line in outswinging the scoop effected an outswinging to such a point that with the boom in the ordinary elevation of discharge, approximately 45 degrees from the horizontal, the scoop or the stick came to a position about right angular or perpendicular of the boom, at which point apparently the effort of the dump line caused complete or final inversion of the scoop, consequently rendering any possible travel beyond that point ineffective for more remote disposition of the spoil.

The hoist line of the Mahoney Exhibit 4 machine is fairly comparable to the hoist line of the Clutter machine in its hoisting function, but is not comparable in the secondary function of the hoist line of the Clutter machine; that is, its adequacy and use for outswinging the stick to and beyond the horizontal position for the striking of a blow.

Q. Beyond the vertical position is that? A. No, sir, I mean speaking of horizontal position, practical alignment of the boom, if the boom is horizontal, for the striking of a blow or the simple inversion discharge, or for the downward presentation used in the beginning of first sinking of an excavation.

The hauling line of Mahoney is fairly comparable to the hauling line of Clutter, in that each was used exclusively for and was adequate for the pulling of the scoop through the material without assistance from any other line. The dump line of Mahoney has no analog in the Clutter organization. This arises from the fact that Clutter's discharge was effected by means of the gravity of the load; the weight of the load and scoop caused the oscillation of the scoop necessary for presenting the mouth either downwardly or diagonally downwardly to permit it to fall out. In the Mahoney machine the carrying yoke, that is, lifting bail, was pivoted at a point somewhat forwardly, that is, toward the tooth end of the scoop, from the center of gravity of the scoop and load, so that the scoop was, to use the expression "tail heavy" and normally took the position where the rear end of the scoop was lower than the tooth end whenever tension was released upon the dump line, and so in the discharge phase and operation it was necessary to pull upon the dump line in order to invert the scoop; power was re-

quired for the operation of the dump line because this operation required an elevation of the load, and this would require a substantial effort.

The other functions of the dump line of Mahoney are distributed to the other lines of Clutter, both of them being performed in and through the hoisting line of Clutter, that is, the secondary function of the dump line, that of assisting in the outward swinging of the stick, was performed entirely and adequately by the hoisting line of Clutter indirectly through this lever action upon the stick. The function of regulating the depth of engagement of the dump line of Mahoney is performed entirely by the hoisting line of Clutter with, or in combined utilization with, the fixed presentation of the scoop which Clutter has—that is, a scoop having a machine-fixed or stick-fixed position and presentation at all times independently of the work and unaffected by the resistance of the work.

On this Exhibit 4 machine there is a strut pivotally attached at a point near the upper end of the stick and extending to a ledge, arcuate in shape as viewed from the rear end of the scoop, so that the strut engaging the ledge will engage and be kept central on the width of the scoop by its pressure upon it, the strut being movable by means of a lever, of a construction not precisely determinable but actuated by the hand line running to the left hand operator, that is, the operator who manipulates the dump line upon the revolving winch head at the left hand side of the machine. The strut engaging the rear end of the scoop had the result of making the scoop in the Exhibit 4 machine, which is called the cornfield machine, semi-fixed in presentation; that is to say, the scoop was by the strut prevented from revolving in the clock-wise direction as viewed from the left hand side, as would result except for the strut from a lifting exertion of the teeth, the strut being in compression. Then the strut would continue to maintain such presentation of the scoop only so long as the lifting was exerted by the teeth; and for this reason, as I have said, semi-fixed. And if in the travel of the scoop the weight of the boom and stick was allowed to ride the scoop for the forcing of engagement, and if the teeth encountered a rising path, that is, a path rising relatively to or from the arcuate path of the scoop, the teeth would be pressing downwardly on the material and the scoop was free to revolve away from the lower end of the strut; hence the

scoop would not be fixed against elevation at the tooth end during its digging travel, but only against depression at the tooth end.

Then as the boom was swung around aside for discharge the strut, of course, had to be kicked off the ledge for inversion of the scoop, for it does not appear that the Mahoney scoop was ever discharged by simple inversion as used in the Clutter machine, the strut being kicked off by the hand operated line and the dump line simultaneously or immediately thereafter pulled for revolving or upending the scoop. It is likely that the dump line would have a tension upon it as the instant that the strut was kicked off, but if it did not, or if it was momentarily relaxed, then it would be immediately thereafter retensioned. The hand line of the Mahoney machine may be fairly compared to the dump line of the Clutter machine, leaving the net difference between the Clutter machine and the Mahoney machine as to the lines and the functions of them, one line of Mahoney, the dump line, having three functions all performed by the hoisting line of Clutter assisted by the fact of Clutter's fixed presentation, and resulting in another net difference in structural balancing of the elements, in that Clutter had fixity of presentation of scoop independently of the work, whereas this machine was placed upon the ground and the scoop allowed to lay flat upon it, and derived its direction, in part from the work, in part from tautening or slackening of the dump line in the hand of the left hand operator, and in cooperation with and in part from the tightening or loosening of the hoist line by the right hand operator, whereas, of course, in the Clutter machine all of these functions being performed by the hoisting line were in the left hand of the one operator.

The Mahoney machine, this Exhibit 4 machine, was not used for the delivery of the blow or for the excavation of single width trench, did not have 180 degree travel. I think that completes my summary of it.

Q. Now, will you pass on to the Vincennes machine —that is right, isn't it, the one shown in Exhibit 5?

Mr. Corbett: Well, they were all the same machine. This machine was used at Gorham and at Vincennes.

Mr. Richey: We do not agree that it was proved that it was used at Gorham.

Q. Well, anyway, Exhibit 5. You can discuss that by comparing it with the other. A. Referring to the ma-

chine of Exhibit 5, the principal distinctions between it and the previously referred to machine are that in the cornfield machine the hoisting sheave is connected by a short link to the upper end of the ditcher stick, whereas in the Vincennes machine the sheave is carried directly upon the head end of the ditcher stick. Second, that in the cornfield machine the hoisting cable was dead-ended directly upon the boom, that is, the end part of the cable, whereas in the Vincennes machine the end part of the hoisting line extends over a sheave carried at the extremity of the boom, and then downwardly to and attached to the lower end of the dipper handle or stick. A third distinction is that in the Vincennes machine the pulley for the dump line is attached by a short link directly to the rear wall of the scoop at its mid-width, whereas there is a yoke or bail in the cornfield machine.

A fourth distinction is that the hauling line of the cornfield machine is attached by means of a bail—or at the pivotal point of attachment of the carrying bail to the scoop, whereas in the Vincennes machine the bail is attached at the forward edge of the scoop. Another distinction is that in the Vincennes machine there are Z shaped pieces attached to the rear end of the scoop extending out a short distance from the side, and that the bail instead of consisting of strap members or bar members has lateral reaches of chain.

The dump line of the cornfield machine extends over a sheave carried at the extremity of the boom, whereas in the Vincennes machine the dump line extends from the same winch head in general through the same course, but passes over a small pulley carried at the side of the boom, and near the point of attachment of the stick and boom, thence downwardly about the small pulley at the rear of the scoop and upwardly, and made fast at the end of the boom, in a manner comparable to the attachment of the dump line in the cornfield machine.

Q. Now, did those changes make any difference in the operation and advantages of the machine? A. Yes, sir, with one additional one which should be mentioned. I was looking to see if there were others.

Q. All right. A. In the Vincennes machine the strut does not appear, nor is there any comparable or analogous element. The functional difference between the cornfield and Vincennes machines is only such difference as would be entailed by the elimination or dropping of the strut attached to the stick and semi-fixing the scoop.

As to the functionalization of the lines, there is a distinction in the hoisting line in that the end part, as I have stated, of the hoisting line extends downwardly and is made fast to the dipper stick, and assists, therefore, in swinging the stick outwardly, cooperating or combining for that purpose with the two parts of the hoisting line extending from the sheave at the head end of the stick, and with the dump line which also was used in the outswinging of the stick. So the outswinging of the stick in the Vincennes machine, then, to summarize, was performed by three distinguishable avenues of power,—the one end part of the hoist line, the other two parts of the hoist line, and the dump line.

Q. Is the machine in Exhibit 5, the Vincennes machine, any nearer the Clutter machine in operation or results than the cornfield machine? A. No, sir. I would say that the Vincennes machine is further from the Clutter machine for lack of its earlier semi-fixed presentation of the scoop to the material.

Q. Now, will you take up the machine of the Mahoney patent, and I don't think it will be necessary to point out all the detailed differences, but any major differences or remarkable differences. A. The Mahoney patent machine has a link at the head end of the stick like the cornfield machine. The hauling bail is attached to the same point as the lifting bail, like the cornfield machine; the dump line is attached to a small sheave at the rear of the scoop like the Vincennes machine; the dump line is carried over a little sheave on the left hand side of the boom like the Vincennes machine; the dump line is deadened as in the Vincennes machine. Those are the only distinctions.

That is still further away from the Clutter than the Vincennes machine, in that it does not have even the moderate fixity of scoop presentation which might be derived in the Vincennes machine from the fact of attachment of the hauling line to the forward edge of the bucket instead of at the center of the bucket.

Now, the Ledgerwood machine, in Exhibit 9—

The Court: This is what?

Mr. Richey: Ledgerwood, they call it.

The Witness: So called by manufacturer or made up by the Ledgerwood Manufacturing Company, I believe, of New York.

Mr. Mahoney: For Mahoney.

Mr. Richey: For Mahoney, that is right. Never used—that is right, isn't it?

Mr. Mahoney: Yes, it is shown that it was used some place.

(Narrative continued.) We have no enlargement of the machine, but the distinctions may be briefly noted. There is no link at the head of the boom, and therefore the Ledgerwood is like Vincennes. The hoisting line extends from the top of the vertical mast of the machine, there being no leaning mast as in the patent of the Vincennes and cornfield machine, out over the end of the boom, and down to the stick, two parts of the hoisting line only acting upon the head end of the stick. The manner of attachment of the hauling line to the scoop is not distinguishable in the photograph which we have. The scoop is carried by bail or housing member which seems similar to the corresponding bail of the Vincennes machine. The scoop is an integral scoop, freely revolving upon its attachment to the stick, the boom is movable by means of the hoisting line, the scoop is discharged by means of the dump line, and outswung by the three elements of effort as described in the Vincennes machine.

This Ledgerwood machine is further from Clutter in that there is no link at the head of the stick. In all of these machines the direction of the bucket at all times is controlled by two power lines. I am referring to the Mahoney machines. Each of these power lines are controlled by a different man. So that if you wanted to get your bucket aimed in any particular direction—to get it aimed with the mouth down to the ground, you had to have the cooperation of two separate men, unless the scoop chanced to have that aim. So far as there was election in the matter of control of it it required two men. I do not regard it as a commercially desirable machine at all. None of these Mahoney machines were capable of being controlled by one man with two hands to two power lines. None of them were capable of digging in rock or hard material.

As to one man operating them it was not possible to move the scoop in any one of the four directions with correct presentation or useful result. The right hand operator would move the point of attachment of his scoop to his stick in any one of four directions at any instant during discharge of the scoop, but he lost thereby the presentation of the scoop. It would be a futile movement

so far as performing any of the useful functions of the Clutter machine is concerned, except by the other operator following with him and cooperating to renew the presentation. It should be mentioned in connection with the last three Mahoney machines that of course since there is no strut at the rear of the scoop, the scoop would revolve over any obstacle encountered in its travel through the material.

Referring to Fairbanks patents 892,508 and 1,056,268, and to the machines illustrated in Defendant's Exhibit 31 and at page 46 of Defendant's Exhibit 30, I will compare these machines in structure, mode of operation and results with the Clutter machine of the Clutter patent. Referring first to the machine of patent 892,508, there is a boom of fixed elevation, staid, attached to the mast by rods or rod 16, a stick slidably mounted at the outer end of the boom for up and down movement and supported by either a power-actuated line, apparently 31 in the chart which we have, or by another line which extends from the lower end of the stick over a sheave and down along the boom to a small cable drum having a brake wheel associated with it for fixing the line. Another control line extending from the upper end of the stick and passing under a sheave at the outer end of the boom, thence down the boom to one in opposite in direction upon the same small control drum. Another line passing from the scoop to the machine. The major lines referred to are the last named, number 56 in the patent, and the line 31; the other two are positioning lines not actuated by power. The scoop is of the integral type, pivoted at its approximate middle to the lower end of the scoop, the rear end of the stick being attached by a short course of chain and hooked upon the foot or near the foot of the stick. The line 31 extends down along the stick and is attached at the front end of the scoop, and in lifting it it operates to hold the scoop in the position shown in Fig. 1 of the patent, the chain 53 being taut. In operation the scoop is drawn towards the machine with, as might be desired the lines to the small control drum 40 tight or not tight, according to whether the operator desires to prevent the scoop from either digging in too deeply or being forced up out of engagement, for filling the scoop. The scoop is then swung about to a position for discharge and the brake is set—the brake 40 is set to prevent revolution of the small drum and hence to prevent falling of the stick and scoop, the weight

being carried by the small line which passes over the end of the boom and down to the foot of the stick. The elevating line 31 is then relaxed and the scoop allowed to invert, principally by gravity, and the weight of the bail, of course, assisting.

The principal distinction in structure between this machine and that of Clutter is that in Fairbanks the boom is in fixed elevation, whereas in Clutter it is pivotally mounted. The elevating line 31 of Fairbanks performs a part of the function of the elevating line of Clutter in that it raises the scoop and stick, Clutter's elevating line also elevating the boom; the hauling line 56 is comparable to that of Clutter. The Clutter machine has no control line comparable to the small lines which are carried from the upper and lower ends of the stick, oppositely passing over sheaves at the outer end of the boom, and oppositely wound upon the stick-fixing drum located near the base of the boom. The performance, in distinction, is that Fairbanks is not able to operate over 180 degrees of digging travel, and hence is not capable of striking a gravity blow. His scoop could be raised and lowered during travel by unsetting and resetting of the brake wheel application of power by the hoisting line 31. The machine is not constructed for drainage work, nor single width excavation.

Q. The next one is Fairbanks patent 1,056,268, as shown in these Exhibits 30 and 31, perhaps with some slight modification. Suppose you take up the patent first and point out any differences? A. Referring to Fairbanks patent 1,056,268 as typical, and I will refer later to such distinctions as I perceive between it and the other similar machines, the digging in this machine is effected by means of the lines 22 in the patent, which is a combined hauling and hoisting line, and which passes over a dead end at the outer end of the fixed boom down about the near extremity of the cradle or bell crank stick structure, about a sheave carried at the end of the structure, and thence vertically and over a sheave in the fixed boom or low mast, and thence to the machine. There is a boom pivoted near the lower end of the fixed boom, and which is elevatable; that is, this digging boom is elevatable, and carries at its outer end the crank-like dipper stick which, in turn, carries at its lower end an inwardly projecting scoop. There is a tie or stay bar between the dipper stick proper and the machinewardly extending upper arm of the dipper stick, which, in the course of digging,

receives tension as the scoop is forced into the material. There is what is called, I believe, in the patent a gate or scraper device, 17 in the patent, pivotally mounted at or near the same point as that at which the crank stick is mounted to the boom, extending down, pendent, from that point, and sweeping the inside of the scoop; that is, having a travel which sweeps the interior of the scoop. This sweeper is attached by a chain to the lower or primary arm of the dipper stick. The bucket is inverted and discharges by inversion with the assistance of the sweeper, being inverted by a dump line 23 which is attached at the end of the dipper stick and extends over a sheave at the outer end of the fixed boom, thence to the power actuated machinery. The operation is that the scoop is lowered by means of the dump line on a brake, snubbed into correct position for the beginning of the digging stroke, that is, with the scoop in its outermost position; the haul hoist line is then wound in, the effect being to, through the crank action of the stick, exert a horizontal effort upon the stick by means of the scoop until the scoop is filled. The entire movable structure or digging mechanism is then elevated by means of the power of the haul hoist line 22 to a suitable elevation and swung about to the proper point of discharge, and the material may be discharged by setting the brake upon the dump line 23 and slacking off upon the haul hoist line 22, the boom then being again swung about over the excavation, and the structure snubbed into the hole. The function of the line 22 is analogous to that of the line 23 of Rood—E. O. Rood patent which I discussed a few minutes ago.

(Noon recess.)

(1:30 P. M. After recess.)

Mr. Richey: Before we start, we would like to let our machine go, if there is nobody that wants to have it tested out—can we?

The Court: Do you want it, Mr. Corbett?

Mr. Corbett: No, we are not interested, Your Honor.

Mr. Richey: All right, we would like to let Mr. Morrison go. You don't want him, do you?

Mr. Corbett: I don't think so.

Mr. Richey: You can release your machines, also, if you like.

Mr. Corbett: Yes, thank you.

A. (Continuing.) In Fig. 4 of this patent, the chain 17 may be seen more clearly than in that view on the chart. The chain 17 extends from the boom to the gate, and along with the chain 18, serves as a limit to the operative sweep of the stick.

The machine of this patent is not usable for striking a blow of the kind and effect of the Clutter machine. While there are but two power lines in the Fairbanks machine, they are not of similar functionalization with those of the Clutter device. The machine is not, as it appears here, usable in trench work of single width. The principal distinction, so far as digging effectiveness is concerned, is that in Fairbanks an upward exertion of the line 22 as required for forcing the scoop horizontally into the material tends to lift the boom, stick and scoop, thereby preventing the forceful engagement which is obtainable in Clutter by his allowing the weight of the boom and stick to ride the stick during its travel.

In another illustration of a machine similar to this, a blueprint, there is shown a hold-down device, marked with the letter "a" in black pencil, required in the commercial attempt to use this machine of the Fairbanks patent, for the purpose of offsetting or preventing the hauling effort of the line 22 from elevating the boom and scoop away from the work, or so relieving the engagement force of it as to tend to defeat penetration. The hold-down device, of course, introduces this disadvantage, that once set, then the path for sweep of the scoop is also set, and in this way deprives the operator of election as to the elevation of his scoop for the uprooting of boulders or the like in the course of the scoop's passage, except at the cost of first releasing and then elevating or lowering and then resetting the control device.

Q. Otherwise this machine is substantially the same as the one in the patent 1,056,268? A. That is correct.

Q. Now, the machine shown at page 46 of Exhibit 30, is that substantially the same as the one shown in the patent? A. I take that to be the same machine.

Q. Number 1,056,268? A. Yes, sir, at least as to the type. I have not examined small details of this machine.

Q. Well, look at it and see if the operation and results would be the same, and the major features are all the same. A. The scoop structure is different from the patent structure, but the functioning is very similar. There is a triangular structure in the photo on page 48

of Defendant's Exhibit 30, which does not appear in the patent illustration, but the dump line is attached by means of a sheave at the end of this structure, and the effect and functions, I would say, are comparable.

Q. When you spoke of this brake "a" of Fig. 31 being employed on the commercial machine, you meant that it would be necessary, in your opinion, to employ something of that kind to hold the boom down? A. Yes, sir.

Q. If it was used commercially? A. Such a hold-down would be required for digging anything but the very softest of materials; such a functioning of lines as is here employed.

Q. You never saw one of them operate? A. No, sir.

Q. Now, Mr. Turner also discussed in connection with the Clutter patent, the following patents: Rood, 1,057,457; Olson, 826,051; Bishop, 1,100,864; Sweet, 1,208,230, and the British patent to Jubb, 11,496. Now, will you take each of those up briefly, and instead of pointing out all the details of construction, point out the differences in operation and result as compared with the Clutter patent, and the major mechanical differences.

The Court: Have you got charts of those patents?

Mr. Corbett: We will have them picked out, Your Honor.

A. Turning first to Rood 1,057,457, and to Figs. 2 and 3 of that patent, in this machine there is the combined haul hoist line and the dumping line, which is also used for lowering the boom and scoop into the excavation. The cycle is not variable to regulating the depth of engagement of the scoop, due to the combination of functions in the haul hoist line. The machine is not suitable for striking the blow as in the Clutter machine. If the scoop were dropped in the position shown on the chart 7 and Fig. 2 of the patent, there would be a stiff-arm or rigid delivery of boom weight upon the scoop which, in my judgment, would not be withstood by the links G prime and G, which connect the anchoring structure of the links to the scoop. The link "g" extends from the point which, I believe, is 9, to the point 9 prime upon the scoop, and would be bent by the action of the nose of the bucket striking the material. The functions in general are not those of the Clutter machine.

Turning now to Jubb, British patent 11,496, in this machine there is a racking device for elevating and

lowering the stick at the end of the boom or fixed elevation which limits the upper range of discharge of elevation to the height which can be attained by bringing the scoop up to a distance below the outer end of the boom approximately equal to the unracked portion of the length of the stick. There is a line 6 for elevating and causing the digging movement of the stick. This has the equivalent of three power members, the digging line and the reversing racking mechanism at the end. The machine has the limitation of inability to strike a blow, for lack of ability to reach the outreaching or extending position necessary for gravity impulse in the scoop.

Olson, 826,051, and referring to the chart No. 5—

Mr. Richey: It is a drawing of the patent.

A. (Continuing.)—which is a drawing of the patent, there is shown an inward arc machine having three power lines, 14, 30 and 28, or, if the boom lifting line 14 be regarded as only adjustable from time to time, then a two power line machine having a boom of fixed elevation and therefore subject to the handicap of a fixed structure above the scoop. The scoop stick is slidably mounted through a guide carried upon the boom and secured by a clamping device 24, and which can be shifted to various points in the length of the boom over some range. The stick is free to move up and down through the collar 22, downwardly by gravity of the stick and scoop, upwardly by the combined effort of lines 30 and 28, 30 being primarily a scoop elevating line, 28 primarily a hauling line. The hauling line is comparable to the hauling line of Clutter. The scoop is of the integral variety. The door structure is not clear in the patent illustration of Fig. 1—and this patent does not appear to be in the volume which I have of the patents—yes, it is, this patent 826,051 I have now located.

The discharge contemplated in the one use of the scoop, as found by reference to Fig. 2, wherein the device is rearranged for use as an outward arc machine, is a door at the rear of the scoop.

The next is the patent to Bishop, 1,100,864, in which there is an elevating boom, a ditcher stick pivoted to the outer end of the boom, and two lines, the one attached by a link to the outer end of the boom, and the other attached to the scoop. This machine has not the capacity of extending the stick to the outreaching position for delivery of a blow of vertical sinking of an excavation.

The discharge is through a door at the end of the scoop "x" and is intended to occur at a point close to the machine.

Referring to Sweet, *et al.*, 1,208,230, we have a machine with three power lines 71 for retracting, that is, causing outreach of the stick, 84 for elevating the stick and scoop and load, and 87 for hauling the scoop in the machinewardly direction. The boom is of fixed elevation, and limits the scoop as to the dumping height and as to lateral clearance required for side swinging. The coordination or cooperation required of the lines 71 and 87 and 84, as would be required in the striking of a blow, would, in my judgment, render it not usable for that purpose.

That completes the list.

Q. Do you agree with Mr. Turner, defendant's expert, that the machine shown in the Rood patent 386,438 is the nearest like Clutter of any of those which you or he discussed? A. Yes, sir, that is my opinion.

The Court: Which one?

The Witness: Rood.

Mr. Richey: The first one this witness discussed, Your Honor.

The Court: The larger number or the small number?

The Witness: The older patent, No. 386,438.

The Court: Well, that is the one the Circuit Court of Appeals said, too, wasn't it?

Mr. Richey: Yes, sir.

Mr. Corbett: That is the one urged by the defendant in the Cleveland case, but our contention is that the Mahoney is much more clearer and much more close, and meets this patent exactly.

Mr. Richey: That is not what your expert said, he said the Rood was the best one.

Mr. Corbett: He also said, when he was calling attention to the links, that the Mahoney device was closer.

Mr. Richey: I don't think he did.

The Court: Well, the Mahoney device and Rood device were both before the Circuit Court of Appeals, weren't they?

Mr. Corbett: Not against this patent, Your Honor. The Mahoney device was not before the Circuit Court of Appeals, or the Cleveland court either, as against this

Clutter patent, because of the fact that the plaintiffs took depositions in that case to carry the Clutter patent back of the Mahoney patent, and the defendants made no effort to overcome that. Now we have overcome that, Your Honor, and that places this as a reference against Clutter, where it was not in the Cleveland case.

Mr. Richey: Well, of course, whether he has overcome it or not is a matter of argument.

The Court: Sure.

Mr. Corbett: I think Mr. Richey has admitted that the Mahoney device is earlier; didn't you admit that?

Mr. Richey: I admit that the No. 4 was earlier, but that was an abandoned experiment. That is the only one I admit is earlier.

Mr. Corbett: Well, we will argue that out later.

Mr. Richey: That is what I say; we cannot argue it out now.

Q. Now, will you look at this Plaintiff's Exhibit 26, the machine which I understand that the defendants claim was used at Joplin, Missouri, and which I understood Mr. Ferris said was nearest like the machine of the first Downie patent in suit, and compare the machine of Exhibit 26 in structure, mode of operation and results, with the machine of the first Downie patent.

The Court: You are getting now to the scoop, aren't you?

Mr. Richey: Yes, we are up to the drop bottom, too, attached to Clutter.

A. In the drawing, Defendant's Exhibit 26, the structure shown for latching the bottom is not suitable for a momentum closure. The latch piece carried upon the bottom apparently engages on the underside of the latch, and the rear end of the bottom of the scoop apparently engages also the sloping face of the latch indicated without the travel of the bottom being stopped. There is no spring to maintain the latch in digging relationship, and while this might engage if the bottom were pressed slowly into position, it would not engage that particular bottom with the force or velocity as set up in momentum closure.

The distinction as to the stick attachment to the scoop is one of the primary distinctions between this and the commercial ditcher.

Q. Well, before you pass the momentum closure, have you a sheet metal model here that you can illustrate that with? A. We have a model here, yes, sir.

Q. Do you think it is possible to close that by momentum in the ordinary operation of the ditching machine? A. No, sir.

Q. Under what circumstances would it be possible to close it by momentum, if it could be closed? A. I do not believe that that is closable by momentum under any circumstances, as shown here,—

Q. Now, you can use this model in illustrating that, if you will, (presenting model to witness). A. —because the bottom in entering its closed position must force the latch outwardly and forcibly, and that imparts a momentum to the latch which would prevent its return in time to seize the bottom before the bottom would rebound from the closed position. We have a model of aluminum in silhouette construction, in which there is a bottom and a latch made faithfully to the showing of Exhibit 26—

Mr. Corbett: Your Honor, I would like to call attention to the fact that the testimony in the case shows there was a spring-operated latch there, and that the Keystone, or Downie saw them used on there, in the depositions that were filed in this case.

Mr. Richey: You do not contend, then, that this is the machine that was used out there, shown in Exhibit 26?

Mr. Corbett: The machine is fully described in the depositions, and it describes the use of the spring-operated latch.

Mr. Richey: Well, that does not answer the question. You are putting this up here as that machine.

Mr. Corbett: That is only one of the exhibits in the deposition.

Mr. Richey: Is that the machine or not?

Mr. Corbett: That is only one of the exhibits in the case.

The Court: Well, it would not be accurate if it hasn't the spring on, and the deposition says it has the spring on.

Mr. Corbett: I just wanted to make that clear.

Q. Did the Keystone Driller Company ever manufacture or sell a scoop like that shown in this Exhibit 26? A. No, sir.

Q. The defendant produced here the drawing marked Exhibit 73-3, showing a chart marked "Bernard

Clutter Device," which is a modification of Exhibit 26, in that a compression spring is connected to the upper part of the latch marked "c", two holes are placed in the latch, and the rope 9 is placed on the latch. Did the Keystone Driller Company ever manufacture or sell any scoops like that shown there? A. No, sir.

Q. I show you the Clutter patent 1,107,899. Did the Keystone Driller Company ever manufacture or sell any scoops like that shown in this patent? A. No, sir.

Q. Did they ever make any and try them out? A. Yes, sir.

Q. And what was the result? A. The latching mechanism here shown is not usable on such a scoop.

Q. That is, it was such a failure that they didn't make and sell that scoop? A. That is right.

The Court: That is the skimmer scoop.

Mr. Richey: Your Honor, that is the one they said they put on the machine.

Mr. Corbett: Clutter said one substantially like that patent, and your own witness said that the Keystone was going to market a device like that substantially as here shown.

Mr. Richey: They handed the patent to this witness, and he said, is that the kind of machine?

Mr. Corbett: And he said yes.

Mr. Richey: We are pointing out that the whole thing is rather nebulous about this machine out there. Just as I said, one substantially alike, some of them thought it was, and some more of them said the same thing.

Mr. Corbett: It was pretty clear that it was a drop bottom scoop, wasn't it?

Mr. Richey: We don't want to argue it here.

Mr. Corbett: I guess you don't.

Mr. Richey: It was clear they couldn't operate like they said it could.

Q. Now, you started to go on and talk about the other features of this Exhibit 26, and to compare its operation and results with that of the first Downie patent. A. A clear and important distinction between the device of Exhibit 26 and that of the commercial ditcher is that in Exhibit 26 the stick is secured to the end wall of the scoop by bearings or brackets, and the scoop is fastened by supports or braces extending from the upper edge of the digging end of the scoop and converging toward the center line of the device, and attached at a point toward

the upper end of the stick. This distinction is very important in considering the potentiality of that device for the striking of the hammer-like blow with the scoop, because such portion of the stick weight as would be deliverable upon the scoop is delivered at the mid-width of the scoop upon the end wall, and would severely dish the end wall. There would be rather a springing apart of the sides of the shell of the scoop, there being, so far as this view shows, (and there being no front elevation of it) no bridging structure across the scoop shell to prevent blowing outwardly under the force of the impact the stick weight upon the rear wall. This would result in the springing action distorting the shell, and, as I believe, rendering inoperative the latch, even as a bottom retaining device, apart from my previous comment in regard to its adequacy for closure. The stick, apparently in this view a wooden stick, I would say, from the fact that the bolts are shown in dots and do not appear therefore to view or by the depositions, an eye beam stick, is torsionally resilient to the degree which would render difficult or prevent the casual undercutting, and would tend to be destructive, or cause destruction, of the stick in the employment of undercutting as commercially performed.

Q. That is, every time you would hit down on this scoop the point of contact being bowed, one place on the bucket would pull back in, and one place out? A. That is correct.

Q. And that would release the latch? A. That would cause the latch fulcrum to be carried forward a considerable distance, for the forces are very severe in this hammering blow, and even with bridge structures, and without the weight of the stick at the sides, and even with the bridging structure across the top, it is very difficult to hold the structure in operative position and condition. And the dishing action of the inplate or the bowing of it would carry the latch fulcrum ahead, and, in my judgment, would shortly destroy it, if not in one blow, then in a short series.

Q. Of course, that would not happen in the Clutter machine because there the scoop was integral and there was no latch on there? A. In the machine of the Clutter patent, you mean?

Q. Yes. A. Yes, sir, in the machine the objection does weigh because the scoop is integral, and the side walls have the bracing effect on the scoop bottom, where-

as in the ditcher scoop of such a type as this the side walls have not the bracing value from the bottom, except as transmitted through the pivots which, however, is not usable for the purpose except when the bottom is stationary or near discharge by simple inversion. The difficulty is that it tends to cause a binding of the pivots here if the side walls are bowed outwardly, and it is difficult to obtain momentum closure by any binding at this point, since the bottom, as I have explained before, is not closed by positive power action, but only by the introducing of the relatively feeble action as set up by the momentum of the bottom itself.

Q. All right; now, will you proceed, as I interrupted you. A. For the reason which I have stated, that flexure of the end wall, flexure of the side walls, or lack of bracing structure over the top of the scoop, I would not regard the device as rigid in the sense required for commercial operation by any blow action. The connection of the stick to the boom is apparently of the short pin type, which would not serve adequately for the prevention of twisting, as used in undercutting operations.

Q. However, the boom is one—I mean the stick is one solid member, instead of being built up? A. Yes, sir, and is apparently, apart from the appearance here—the inference is, of relatively narrow structure, even though, as I say, there is no front elevation by which one could determine just how the stick is made or what its members. There are no side rake teeth or rooting teeth on the device, and this would prevent the operation in trench work.

Mr. Corbett: I would like to say here, Your Honor, that in the depositions it is said by at least one or two witnesses that side rake teeth were used.

Mr. Richey: Now, if we are going to argue this matter—

Mr. Corbett: I only want the court to get this clearly as we go along.

The Court: He just called that to my attention.

Mr. Richey: Our position is that some of them said one thing and some another, and there is nothing definite about that except this one drawing.

The Court: All right.

Mr. Richey: You may proceed.

A. The absence of rooting teeth in this structure would prevent all single width work, excepting in material so soft that a scoop without any teeth could be used

for excavating it, though even then at a considerable sacrifice in power as compared to a suitably toothed scoop. Of course, it would therefore also prevent the rooting penetration of materials too hard for normal, slow motion digging, and would to some extent have a bearing upon the matter of undercutting, since undercutting is advantageously, or most advantageously, performed only in single width work. This would agree, that is, the absence of the side rake teeth in this one matter, would agree with the stick structure, and the stick scoop connection, for the same deficiency.

There would be in single width work, if the scoop were altered suitably for it, a clearance developed, there would be a severe pressing in of the sides of the scoop, that is, direct transverse collapsing pressure would be developed in the scoop walls, tending to squeeze together the sides, and since there is no bridging structure across the scoop, would further tend to have the effect of preventing momentum closure or even of gravity opening of the bottom, for that function is also performed, not positively by engine power, but only by the unbalanced weight of the bottom and boom. For lack also of the overhead bridging and bracing structure of the commercial ditcher, I believe that there would be severe flexures in the scoop shell at the corners of the scoop, due to the engagement at the one side or the other, if used commercially, and the application of hauling power at the mid-width of the scoop and a bail, as shown, the tendency of a boulder or solidly imbedded obstruction at one side would tend, not only to cock the scoop to one side, and as permitted by the twisting member type of stick, but since the bottom is not integral, that the sides would tend to cause diagonal flexure of the scoop walls, to the box-like moment. Whether this would be sufficiently destructive of the shell to be prohibitive, we can only speculate.

There would also be a closure of the scoop as illustrated by one side wall receiving upward pressure and the other a downward, as would be developed when effort was made to uproot an obstruction at one edge of the scoop. In this way the bail would be exerting an upward or machineward force at the mid-width of the scoop, and the stick would be developing an upward lift, and this would tend to cause a scissorlike movement.

The distortions occurring in the scoop body would be in fact of several varieties, diagonal in the transverse plane, and diagonal in the longitudinal vertical plane.

That completes a general summary of the structure, except as to the one point here that if a blow were delivered by teeth in this device, there would be a bowing to some extent of the braces here, which, for lack of integration of the scoop, would be somewhat severe.

Mr. Corbett: Will you show which braces?

The Witness: The scoop braces. Called scoop supports in this view.

Q. Now, assuming that a machine had been used like that illustrated in this Exhibit 73-3, chart 64, where the springs and the rope, etc., had been added to the latch, would that be an improvement over the one shown in Exhibit 26? A. No, sir, I believe not.

Q. Do either of these Exhibits 26 and this chart 64 show a commercially acceptable machine, in your opinion? A. No, sir.

Q. Will you next take up and discuss the other patents and devices that were discussed by defendant's expert Ferris in connection with the first Downie patent, which are as follows: Patent to Butler, 493,421; Davy reissue, 11,156; Pugh, 806,288; Clutter, 1,107,899; Wagner, 1,125,537; Pugh, 1,316,058; Pugh, 1,339,606; Morrison, 1,249,805; Keith, 1,315,512; Hoar, 1,322,570; Olson, 826,051; the Bucyrus bucket of defendant's Exhibits 70 and 71 and the machine shown in the American Railroad Ditcher catalog, Defendant's Exhibit 35, and compare them with the structure, mode of operation and results of the machine of the first Downie patent. Now, will you point out more particularly the differences in operation and the functions, and the major differences in construction, without going into the details of the various constructions. A. Referring first to Butler 493,421, this is a drag line scoop, not a scoop entering the combination such as the machine of the first Downie patent. The digging edge or blade of the scoop is serrated for tooth-like action upon material, and the side edges of reenforcing strips at the side so shaped at their lower edges for the purpose of improving penetrability at the edge of the scoop. The reliance placed by the patentee upon this edge is not clear, because of the use of cutter blade ahead of the scoop side. The device is not usable as a commercial ditcher scoop even with the addition of the remaining items of the combination, such as a ditcher stick and the functionalization of the ditcher. The bottom, of course, since it only opens through the rear 4/5 or so of its length, the cutter bar being in-

tegral with the side plates of the scoop, is not tiltable for the purpose of rooting, and the side bars which appear in this plan view of the scoop are not so constructed and arranged as to clear the structure of the scoop, indicating that the scoop has no use in single width excavation, nor in hard material.

Referring next to the Davy reissue 11,516, this also is a scraper bucket, similar to that of Butler just discussed, and may be closed by lowering the scoop and allowing it to rest upon its bottom. The shape of the nose of the bucket indicates it is built for penetrability of the scoop, although the use of special cutter bars ahead of the sides of the scoop indicate non-reliance upon the shaping of the nose of the bucket itself for entry to the material. This, of course, is not part of the ditching or the single width cutting machine of the type of the patent in suit. The sides of the scoop fall with the bottom; that is to say, the entire shell really falls in the discharge, only the upper portion remaining stationary with reference to the housing structure, and of course this would prevent the supplying of rooter teeth at the sides for any such work as rooting and the like. It is not of the class of the machine here in suit.

The next is Pugh 806,288. In this machine there is a scoop loosely or indefinitely mounted at the lower end of the reciprocating stick. The distinction at once apparent as prohibitive in this machine is that it has at least four or five distinguishable power members, and is not used for the purpose of the machine in suit. The bottom is closed by snagging the teeth against the above grade excavation or wall of bank as shown in Fig. 20 of the patent as reproduced in chart 22, from which I am speaking, the adaptation for snagging closure being more particularly shown in Fig. 20. In the last sentence I referred to Fig. 20 when I should have said Fig. 2, at my first mention of the chart. The machine had no single width work to perform, and would not be usable for that purpose. Of course, it has no motion beyond the plumb position of the scoop, and digs only outwardly from that, being an outward digging scoop. That is not of the class of the commercial ditching machine.

Referring next to Clutter 1,107,899, this is a scoop of the skimmer type, tried by the plaintiff company, incidentally, and not used commercially. It is not of the class of the machines here in suit, being an outwardly moving scoop, and one which moves along a straight line,

and for the excavation of materials lying above the grade or plane upon which the machine is supported. The bottom is not closed by momentum.

Referring next to Wagner, 1,125,537, this is also of the skimmer type, and is a general construction at one time considered by the plaintiff company. The one point at least or reason for citing this patent is the side tooth Z as seen in Fig. 2, a tooth carried upon the bottom of the scoop and so positioned as to cut outwardly beyond the side wall of the scoop. The error of this citation is that—or of its relevancy to a ditcher of the class here in suit—is that a tooth carried by a quadrant is not acceptable for cutting side clearance in trench work. The reason, apart from the structural disadvantage and limitation of it, is that such a tooth projecting laterally from and carried by a bottom interferes upon the side walls of the scoop when the bottom is swung down diagonally to get what may be called a running start into the ascending quadrant of its closing travel. It is necessary to have what we have called swing freedom for the bottom, that is, freedom and especially in the ditcher even more than in the skimmer, freedom for the bottom to swing at least over 180 degrees, and preferably more, this because the effort at closing may be insufficient and may be stored up and accumulated for a subsequent closing effort or manipulation of the scoop if the bottom has a swinging freedom back of its plumb position, and the manipulation may then be used to add to the stored effort.

As I have said, this is peculiarly necessary in a ditcher, because the ditcher needs to be closable at various positions or inclinations of the scoop; that is, as represented by various degrees of outreach of the scoop; whereas the skimmer only requires closure when the bottom is elevated somewhat from the horizontal, that is, sufficiently for the scoop to run down to the boom with sufficient velocity to set up the momentum necessary to effect closure with the snapping of the motion of the scoop body. This leaves, of course, then, only 45 or 50 degrees of angular range of the boom within which the bottom is desired to be closable, and hence the bottom is always standing or hanging plumb less than 90 degrees open, whereas the ditcher may be required to be closed when the bottom is hanging as much as 100 or 120 degrees open. Hence the backup freedom, the angular freedom for the running start at closure is moved back substan-

tially of the dipper. As I say, the point to this is that it just prohibits definitely the use of the side clearance cutting tooth carried up on the bottom and prevents the commercial freedom necessary for the closing of the bottom, and of course it would also prevent any such performance as what we have referred to as the rooting or scoring function for getting at exceptionally hard corner material in difficult digging.

Referring next to the patent 1,316,058, this is a drag line machine having a falling bottom closed by tension and of the hauling line 51. That is not of the class, nor usable for the purpose of, the machine of the patent in suit. It is not usable in single width. The bottom is closed by snagging the teeth 25 upon the face of the work, so it lacks that quality which we call independent closure, or restoration. The scoop does not have independence of presentation to the work; that is, it depends on the work not only for the resistance necessary to close the bottom, but for the support of the scoop, and is therefore not usable for uprooting boulders or similar material.

There are, of course, three power lines, one for elevating the boom, one for retracting the bucket, and one for hauling it machinewardly.

The next is that of Pugh 1,339,606. This is of the same general class as the Pugh patent just discussed, that is, drag line type; the scoop is lowered to the ground and the bottom is, while adaptable for snagging the teeth on the ground, is also adapted for closure by the member 49 adjoined to the bottom, and which arm exerts a closing motion, and when and as pulled by the hauling line. The point to the patent is that there is a coggle arrangement whereby the cable connection nature of the hauling bail or of the arms, rather, was braced against or away from the upper forward corner of the scoop to prevent the bottom from coming open. This machine is not of the class of the patent in suit, and is not usable in trench work of the commercial class of this machine. Of course, no boom weight can be exerted upon it, and the presentation, therefore, of the scoop is not independent of the work.

The next is Morrison 1,249,805—

Q. In connection with that, will you consider the photographs, Defendant's Exhibits 76 to 79, said to show the Morrison machine? A. These photographic views illustrate the same general type as that of the Morrison

patent. All of them, as I understand the patent, and the views in the photos, are outward arc buckets of the class used in excavating above the surface, upon which the handling machine is supported. In all of them the forward or downward portion of the scoop comprising the bottom of it and the part of the side walls is as one integral structure pivoted to the forward or rearward portion of the scoop, there being plates secured to the upper scoop and serving as hinge structures for the lower portion, and the lower one-half or shell of the scoop lines up with the upper portion according to a part of the description in the patent, and abuts closely with it; the line-up is apparent in the view of at least one of these photographic exhibits, No. 77, where the lower part of the shell is closed to the upper part.

The reference is made as suggestive of a scoop usable on a commercial ditcher or usable to produce a ditcher like the commercial ditcher here in suit—patent of which is here in suit—even though the scoop is, as I say, of the outward arc class, and not, so far as I understand the patent, or any of these views, or any of the common knowledge here in regard to it, ever been used for that purpose.

The structure of the latch is a point which makes any such adaptation prohibitive, in my opinion, and I would call attention to the slope or inclination of the engaging surfaces of the latch piece upon the lower shell and the latch carried by the upper shell, and that these surfaces are of such an inclination that a force acting upon the lower shell tending to cause opening movement would cause the latch to be pushed out by the latch piece. Such a force in the lower shell might be developed in a number of ways, two of which are notable; first as when the teeth are allowed to rest upon the ground and weight or pressure is exerted through the stick, a forced engagement of the teeth. This would cause a leverlike action on the lower shell tending to carry the lower shell away from the upper shell and produce the latch disengaging pressure to which I have referred, due to the opening component there exerted. A second instance in which such a pressure would be developed would be in any attempted momentum closure of the scoop such as might be effected if the scoop were given the correct motions, and if the lower part of the shell and upper part did not abut closely, which they do according to the patent, but not made clear in photographs as to whether

they do or do not, and which close abutment would prevent the occurrence of the interval of time then desired for the latch to fly back and seize the bottom. And if now such be supposed, and motion necessary for inducing momentum of the lower half of the shell be supposed, then the rebound of the lower shell from its contact with the upper would set up the pressure to which I have referred. The front end of the lower shell would contact upon the front end of the upper shell before any such movement had occurred as would be necessary in the commercial machine for momentum closure in the ditcher, that is, the inward arc below grade use. As I have said, there is less angular freedom needed for the bottom in the skimmer, and there is still less needed in the bottom of the outward arc type to which this scoop belongs. In the ditcher, I would think at least twice as much is required, and the structure does not permit such a freedom of the lower half of the shell, there being interference there—as I say, the front edge of the lower half and the front edge of the upper half, since the two shell sides, upper and lower, are lined with each other, so far as we can determine from the photos and the patents. There are no rooting teeth on this scoop, and of course none were needed in its use, according to the work suggested by the photos here exhibited, and the work suggested from a reading of the patent, that is, outward arc operation. Any supplying of rooting teeth for this scoop would involve some difficulties because of the location of the hauling bail and the necessity in a ditcher for having a bail which will not interfere upon a movable bottom, either when the bottom is closed, or when it is open,—open as when discharging, closed as when digging. This closes the bail down into the position which would be the only available position for side rake teeth, and then of course the lower shell is of such a depth as to make structural difficulties in the way of any such tooth structure. What was the next, Mr. Richey?

Q. The Bucyrus bucket, Exhibits 70, 71 and 72. A. Oh, yes. Referring now to Defendant's Exhibit 70, a blueprint, and Defendant's Exhibits 71 and 72, photographs, which I understand to represent structure or parts of the structure similar to the photographs—this is also, as I judge, and believe a scoop of the outward arc class as suggested by the stick mounting at the upper end of the scoop. It is somewhat on the lines of and of the type of the Bucyrus bucket, or Morrison bucket just

discussed, that is patent 1,249,805, except with a line dividing the upper and lower portions of the scoop, and has a different relationship to the bottom of the scoop. The general deficiencies are as remarked in the previous discussion. This exhibit is brought forward for illustration of a tooth carried upon the lower portion of the scoop, the tooth being carried, of course, on the same lip blade and being a part of the integral complement of teeth as the other teeth. It does not cut a clearance for the scoop, and it has been suggested that the tooth could be extended to such a point as to effect side cutting clearance for the upper part of the scoop. The objection to the tooth, whether in its present position or whether extended, is, in general, the same as that which I have suggested with reference to the mounting of the side clearance cutting tooth upon a skimmer scoop. That is, if this scoop so toothed were attempted to be used upon a ditcher, it would interfere even more quickly or at a shorter angle of moment of the bucket toward opening than was the case in the Wagner skimmer, upon the side walls of the scoop. This would not necessarily prevent the opening of the scoop sufficiently far to discharge material, especially in the outward arc use; it would be very awkward and would tend toward developing heavy shears in the bottom pivots on the ditcher, because there frequently the scoop is discharged, as we saw in the moving picture last evening, when the stick is in a fairly outreached position, and in the case of which discharge the bottom falls open impelled by the falling load more than 90 degrees, and sometimes as much as 130 or 140 degrees. This scoop shell here has no such angular freedom, and of course would not only severely stress the parts but possibly retain a portion of the load.

Q. Mr. Ferris, I believe, said that that scoop there was designed for stripping in coal mines; is that right? A. So far as I am aware, I would judge that would be the fact.

Q. Is that a use in which excavating machinery is used pretty generally? A. Yes, sir, very general.

The next is Keith, 1,315,512. I believe there is no enlargement or chart of this figure. This is a three line machine, having an integral scoop fixedly attached to the lower end of the ditcher stick. The machine is of the inward arc type. It discharges by inversion by means of a pull upon the dumping line 26. The operation of the machine, except for spot discharge, is directed to the

same class of work as that of both the Clutter and first Downie machines here in suit.

The next is the patent to Hoar, 1,322,570, cited, I believe, as a reference in the stick construction, probably of claims 7 and 8 of the first Downie patent. This is an outward machine, digs by means of a line 28 which exerts a pull upon the upper end of a lever stick, which carries at its lower end an end-dump scoop. The stick is of channel construction, an extension of the stick being also of channel construction with the flanges turned inwardly. The major or lower portion of the stick, that part carrying the most severe bending stress in the regular operation of the scoop, has channel flanges turned outwardly. The channels of course are not associated or developed here in the same combination as the combination of the patents in suit, and the machine is not of the class of the patent in suit.

The next is Olson, 826,051, cited, I believe, as being, in the opinion of defendants, the nearest in form of scoop to Clutter. I believe that is an error. This is the machine to which we have referred previously, that is, having a stick mounted to slide through a collar.

Q. It is not any more pertinent to this first Downie patent than to the Clutter patent, is it? A. No, sir.

Q. And your discussion of any one patent applies to the other patent? A. My previous remarks will apply in this instance.

Referring now to the American Railroad ditcher as shown upon Defendant's chart 63, this is an outward arc machine, used for the shallow ditching along side of railroad track beds, and has for its operation three power lines: The one for retracting the scoop toward the machine, preparatory to the excavating stroke, a major digging line extending over the scoop to the extremity of the boom, for hauling the scoop through the material, and a line for elevating and lowering the boom. It may be that the boom hoisting line is used only occasionally for readjustment of the height of the boom according to changes in the grade at the bottom of the ditch at the side of the road. On this assumption of fixed elevation of the boom, or on the first assumption, that is, that the hoisting line is used regularly in the digging cycle, it is a three power line machine. It is not of the class of the machines here in suit, and is not subject to similar duty.

Q. Referring now to the second Downie patent, the defendant's expert, Mr. Turner, discussed the following patents, some of which you have already talked about: Fairbanks, 1,056,268, Hoffmeyer, 1,385,322; Burke, 1,562,288; Bishop, 1,100,864; Bansmer, 1,064,120; Bishop, 1,103,476; and Bathrick, 1,023,356. You have examined all those patents, have you not? A. I have.

Q. None of them show the abutments or operate like or perform the functions of the abutments in the second Downie patent, do they? A. That is correct.

Q. I believe, as far as Mr. Turner would commit himself on that, that the Hoffmeyer was perhaps the best of the bunch. Will you look at that one and compare its operation with the second Downie patent? A. Referring to Hoffmeyer, 1,385,322, there is a stick fastened by a pin member or bolt extending transversely of the foot of the stick, and fastening the stick to the top of the scoop. There is also a brace containing a turn buckle, bracing the digging end of the scoop to an intermediate point in the length of the stick; there is in this machine no structure suggestive of the structure of the second Downie patent. The machine is of the same general class as the commercial ditcher of plaintiffs' patents here in suit, but otherwise the reference is difficult to treat because of remoteness.

Q. Now, I think Mr. Turner also mentioned the Fairbanks patent, 1,056,268, more particularly in this connection. You have already discussed that as a general machine. Will you compare and state whether or not it has these abutments of the second Downie patent, or their functions or operations? A. This probably is cited for the projection or strut 13 in Fig. 1 of the chart, and which is adapted to contact with the dump line 23 when the stick is drawn some distance along its machineward travel. The cable would be kinked over the standard or strut and would serve to maintain a moment of the line 23 about the point at which the stick is pivoted to the end of the boom. But as to functioning in the manner of the device of the second Downie patent, I do not believe it so functions since there is no lever action as there is in the machine of the patent.

Q. I next call your attention to Defendant's Exhibit No. 34, which I understand shows the top part of the boom and stick of one of the first Clutter machines that was made. Will you compare that in operation and in results with the second Downie patent. You may use

this sheet metal model to illustrate, if you will. A. The structure illustrated in the sketch, Defendant's Exhibit No. 34, is the structure up about the head end of the stick and outer end of the boom of the Clutter machine as it appears in the patent drawing, and as at first made. I do not know that dimensionally it is accurate to the patent drawing or to the first commercial machine; but it does illustrate a contact which occurred in a silhouette model which we have here, not apparently an exhibit. The point to the matter is that the links which connect the hoist sheave with the upper end of the stick contacts at an intermediate point in their length with their upper forward corner of the boom extension members, and thus stop at a point short of the otherwise full travel of the scoop; that is, full travel being such that the scoop will be drawn clear in against the boom, or almost against it, and prevent such travel. The occurrence of this interference does not serve any useful purpose and does not serve, in any sense, the purpose of the structure of the second Downie patent. In the second Downie patent, the contacting of the stops, that is, the stopping of angular movement as between the links or bridle and the stick, served to introduce or initiate a certain range of stick movement wherein there is a more positive and accurate control of the in and out positioning of the stick and scoop than would be available without the device and the contact; whereas, in this interference in the first Clutter machine, no such range is initiated by the occurrence of the contact, but, on the other hand, the inward movement of the stick is simply for shortening, and the range which would occur beyond prevented. The interference cannot be referred to as having a function, for it had none, being an accident, and therefore it is not possible logically to compare the function of this with the function of the machine in suit.

Q. You rectified that in the Clutter machine directly after discovery? A. Yes, sir, in the normal course, as soon as the interference became apparent, which was in the nature of a draftsman's error that curving along this—

Mr. Corbett: I think this witness is talking about a period of time when he was not with the Keystone Driller Company, and he is not qualified to talk about what they did to correct this matter.

The Court: Of course the witness must testify from his own knowledge.

Mr. Corbett: Have you any knowledge of this actually?

The Witness: I have been in charge of the designing department for a number of years and know of the occurrence.

Mr. Corbett: But you were not there when that change was made?

The Witness: I did not make the change; I know of it only as an item of the history.

Mr. Corbett: This item of history is hearsay.

Mr. Richey: I offer that in evidence as Plaintiff's Exhibit P-61, that is, the model the witness has discussed.

Mr. Corbett: Objection to the introduction of this model and the testimony relative to it, on the ground that it is hearsay.

The Court: It will go in the record.

Mr. Richey: He not only discussed the fact that it was an accident—

Mr. Corbett: He did not know whether it was an accident or not.

Mr. Richey: I say he discussed that; but he also discussed the fact that in his opinion it was not the same as the second Downie patent.

The Court: We agree with his opinion. Let it go in for that.

Mr. Corbett: Exception.

Q. Now, coming to the third Downie patent, the defendant's expert, Mr. Ferris, discussed in that connection the following patents; King, 589,565; Downie, 1,511,114; Howard, 674,417; Boehm, 999,953; Coffey, 745,329; and Robinson, 1,047,991. Will you take those up in turn and compare each one in structure, mode of operation and functions with the machine of the third Downie patent? I will add to that the construction on the Thew device shown in the exhibit. You go ahead with the patents and I will look up those exhibits and add them later.

The Witness: I believe you gave me King, 589,565.

Mr. Richey: Yes.

The Court: Do they claim that has anything to do with this third Downie patent?

The Witness: This is not the chart, Your Honor, I believe there is an error there. This is the chart of patent 579—

Mr. Corbett: Oh, they have the wrong patent.

Q. Did you find it? A. I will speak from the patent drawings, there being no chart.

Mr. Richey: Here is a copy of the patent, Your Honor, if you would like to see it.

The Court: Yes, I will follow it. This is with reference to the attachment.

Mr. Richey: What has been called the assembly or fool-proof arrangement.

The Witness: Referring to Fig. 6 of the patent, there is shown a connection between the stick and the scoop of an outward arc machine, in which bolts W-3 are employed to secure brackets W to the top wall of a scoop. The purpose of the patent is to provide for the interpositioning of variable thickness elements for adjusting the lead or presentation of the scoop. The brackets W—

Mr. Corbett: This is it. (Shows chart.)

The Witness: The brackets W are fastened by means of bolts to the dipper stick, and comparing the structure, then, as a means of fastening a stick to a scoop, with the structure of the third Downie patent, it may be remarked that, although some of the bolts are in tension, a considerable number of them, still there are bolts which are in shear, as indicating the liability of the structure to develop play between the brackets W and the stick, the connection not being wholly by way of bolts and shear, nor free from play as developed. One of the brackets, the one marked W, has a flange at the lower end of its stickward face, contacting face, tending to prevent that bracket W from sliding up along the stock. The other, however, has no such, and apparently would be free to move downward as play might develop in the hole through which the bolts U pass. The use and purpose of the scoop is of course not the same as that of the machine in suit, and it is not used here by the patentee for the same purpose as the interchangeable stick scoop structure of the patent in suit.

Referring to Downie, 1,511,114, this is one of the patents in suit referred to as a reference for the third or bail patent. In this bail construction the stick is joined to the scoop by means of bolts,—or is joined to hangers, I should say, by means of bolts, and the hangers are joined to the scoop by suitable means. The patent does not indicate whether the connection between the stick and the scoop would be by bolts or rivets, either one

being suitable; but the softening elements, whether pins or bolts are placed in shear. Of course a point to the structure of the third Downie patent is that small rivets may be placed in shear without the possibility of the development of play, bolts can hardly be so placed, unless they be given a driving fit in a reamed hole which, in turn, introduces the difficulty of injury to the bolt at insertion, and causes grave inconvenience in placing so heavy a structure as the ditcher scoop in such accurate relationship with the matching member, the stick, as to permit the insertion of such bolts. The patented structure, by using bolts which are in tension primarily, and which, by a tightening of the bolts draws the scoop with the ready means of a wrench and nut into its final position, rendering the interchange of scoops more convenient than is possible with neat drilled holes, or even loosely drilled holes must be matched up and members drawn into position, either by wrist pins or wedges, or attempting very fine action of the machine for the matching up of the holes.

It was in this machine here as shown in the first Downie patent that we developed the play upward, or from which we escaped by means of the machine of the third Downie patent. We at this time of course did not know of the possibility of using this later developed structure. The third Downie patent is subsequent in development to the first Downie, and represents a perfecting of one of the divisions of the structure entering the first machine, and the need of which was developed by the commercial use of the first machine.

Referring next to Howard, 674,417—

Mr. Corbett: There is no chart on that, I think, Your Honor.

This shows a dipper stick and scoop, and is cited for detailed construction of the dipper stick in which, in Fig. 3, four angles are used, and in Fig. 4 two channels, the section at that point; the channels of which the flanges are turned inwardly, a wooden filler being used for the spacing of the channel members. The structure is not here employed in the same combination, nor having functions similar to the stick in the combination of the commercial ditcher, although there are stresses similar to it at some phases of operation, as for instance in the twisting of the stick of the outward arc machine, which is one of its duties.

Referring next to Boehm, 999,953, and to Fig. 5, I presume, to be the reference here. There are shown channels in spaced relation also in Fig. 4. The machine is not of the class, nor the channels employed as elements in a similar combination, nor as having similar duty to that of the channels employed as elements in the combination of the patent in suit.

Referring next to Coffey, 745,329, there is a stick shown having channels inwardly facing. In one view the channels are used in composing two members of a ditcher stick as used upon a shovel dipper. The stick is not apparently joined to a boom by means of similar bearing structure, nor used in mechanism of the class of the patent in suit.

Referring to Robinson, 1,047,991, there is shown a machine employing a stick for sections as appearing in Fig. 6 are channel members, and in which wooden fillers are used. The machine is of the outward arc class.

Q. You went out the other day with defendant's experts to permit them to make some alterations or something or other with the machine out there in the Sam Davis lot that we demonstrated? A. To make an inspection of the machine, yes.

Q. What was done out there, just briefly? A. The defendants' experts took certain measurements in and about the head of the stick and outer end of the boom. I don't know in detail what measurements. Then a point of interest was the bail construction and the fastening of the foot of the stick in the bail. We removed one of the bolts which joined the stick to the bail. The hole diameter, that is, the diameter of the holes in the foot of the stick and the bail were measured. The diameter of the bolt was measured.

Q. You gave them opportunity to do everything they asked to do? A. Yes, sir.

Q. Have you figured the tension and shearing stresses on the removable bolts shown at 28 and 34 in this third Downie patent, 1,709,466? Have you ever made any estimation of that? A. Bolts 28?

Q. And 33,—I meant to say instead of 24. A. 33 is a vice bolt or clamping bolt at the foot of the stick. I have never calculated accurately the relative stresses, that is, the tension stress as compared with the shearing stress developed in these bolts in operation. Computation could be made; but I regarded shearing stresses placed upon these bolts as negligible in practice if it

should be developed. As a matter of fact, however, the bolt 33, clamping together the two vertical legs of the angles which form the reinforcement for the bail, seizes the base or foot of the stick in such a way as to prevent any actual movement; and if actual movement would occur, it would result in only a negligible shearing force upon these bolts. These bolts are so very large, and the tension stresses in the digging operation in the striking of blows are so very great, compared to the shear which might develop, that, in the matter of practical designing of the device, it is simple negligible.

Mr. Corbett: Is he talking about the machine on the Sam Davis lot now?

Mr. Richey: Talking about the machine of the patent in suit. It is the same thing.

Q. Of course, in these big machines, the big practical machines, the various stresses and strains are not ever entirely eliminated as in a scientific instrument? A. The stresses are larger and there is not the precision necessary in the same degree as in a scientific instrument.

Q. If there is a mere trace of a particular kind of force, it is regarded as negligible and practically nonexistent in a big machine? A. In nearly all elements of structure there are minor secondary forces which, while possibly calculable if important, yet are not of sufficient importance to justify calculation; and that is the case with these bolts here.

At the inspection the other day by Defendants' expert, after the measurement had been taken at the foot of the stick, I tightened the clamp bolt drawing the angles of the bail together so as to firmly grip the foot of the stick, illustrating one of the utilities of the use of the bail, and produce a strictly firm structure and the prevention of any shear until or unless this bolt 33 should by rust or by loosening permit the release of such clamping effect. The primary object of bolt 33 is not to prevent any possible rotation of the foot of the stick, for the flanges are spaced close enough that little or no movement occurs. The prime purpose of bolt No. 33 is to prevent possible outward buckling of the flanges of the stick when the scoop bail is subject to severe downward stresses from the stick. In other words, to prevent buckling of the legs of the channel.

Q. You saw the Osgood machine out there? A. Yes, sir.

Q. When you said that the strain on the corresponding bolts was tension and not shear, you of course did not mean that there might not be a trace of shear? A. There might be a trace of shearing, yes.

Q. But as far as the practical design and operation, it is negligible? A. That is precisely correct.

Q. Going back a minute to this Joplin machine as illustrated in Defendant's Exhibit No. 26, I will ask you this question: Suppose the bucket used on the machine—

The Witness: You mean Defendant's Exhibit No. 26, or chart 64?

Q. I meant 26: Suppose the bucket used on that machine had been any bucket, any skimmer bucket, that the Keystone Company ever manufactured; would you say that such a machine would operate in the same manner as you have already described that 26 would operate? A. In my opinion the same operative difficulties would be encountered, and the remarks which I have made in regard to the showing made in Defendant's Exhibit No. 26 would supply.

Q. No Clutter ditching machines equipped with any skimmer scoop ever manufactured by the Keystone Company would be capable of operating like and performing the functions of the machines of the first Downie patent? A. That is correct. No skimmer, of Keystone manufacture, or within my knowledge, would be adaptable in that combination.

Q. Referring to the fourth Downie patent, 1,716,432, in connection with that patent, the defendant's expert, Mr. Ferris, discussed the Butler patent, 493,421; the Davy patent, 508,685, and the Hemme patent, 1,233,574. Will you take up each one of those and compare it in structure, mode of operation and functions with the device of the fourth Downie patent?

Mr. Corbett: What are they, Mr. Richey? Have you charts of them?

The Witness: Referring to Butler, 493,421, I do not believe that the nose construction of this scoop is comparable in its utility or in its potentiality for the combination in a commercial ditcher with the tooth structure of the fourth Downie patent; and in my previous comments with regard to the scoop, I mentioned the fact that the nose structure here provided does not clear the sides of the scoop; has no possible utility for the purpose of rooting; does not serve in this scoop as shown, and could

not be adapted for use in a commercial ditcher for the purpose of the teeth represented in the patent.

Davy, 508,685—have you another copy of the figure, Mr. Richey, there is no chart. Could you show His Honor a figure, if he desired to look at it?

Mr. Richey: No, it is in that book there, 514,645 to Davy—no—it is 508,685—I beg your pardon.

The Witness: In this patent the plate C is bent upwardly at the sides of the scoop, and is cut upon a diagonal line and chamfered upon its inner edge for the reception of the material entering the scoop. The construction, however, is not usable in a ditcher because so far as the interfering details are concerned, which, while details are still prohibited such as this, with the plate C, where it passes up around the tooth nearest the right side of the page in Fig. 1, must form there a shoulder for which no clearance would be cut by the tooth or strap on that side of the scoop. This would prevent downward penetration unless the structure were redevised. An item of importance is the removability of the teeth for redressing, their permanence of shape; while the vertical shearing edges are not required to be redressed nearly as frequently as the horizontal penetrating edge of the tooth of the patent in suit, still it is an item for consideration and, of course, would not be nearly so feasible in this structure where the lip blade itself forms the ascending or trimmer element of the tooth structure. The scoop is, of course, not a dividing or falling bottom scoop, hence there is none of the interference or the antagonisms which are encountered in the development, and which have been overcome in the development of the fourth Downie patent as applied to the commercial ditcher.

Referring to Hemme, 1,233,574, and to Fig. 2 thereof, this shows a cut blade or nose plate for a scoop in which there is a horizontal portion 18 and a vertical portion 14. This apparently is a scraper device of some description, but presumed to be analogous to a scoop in that it separates earth. The vertical edge is not suitable for the most advantageous application of power to the rooting up of material. Of course there is no pivoted bottom or any of the combination premises, conditions or possible utilities in this structure as compared with the patent in suit.

Mr. Richey: The silhouette model referred to by the witness in discussing the Joplin machine is offered in evidence as Plaintiff's Exhibit P-62.

Mr. Corbett: We object to that model because it is irrelevant and immaterial and not properly representative of the apparatus it is intended to show.

The Court: It was admitted once before.

Mr. Richey: You do not deny it is the same as your Exhibit No. 26, do you?

Mr. Corbett: Yes, we deny it.

Mr. Richey: All right. I will have him compare it. I show you a wooden bottom side rake tooth marked Exhibit No. P-63; this is a duplicate of the first side rake teeth manufactured by the plaintiff under this fourth Downie patent, is it not?

A. Yes, sir.

Q. How long did the company manufacture them like this? A. A matter of a year or two, possibly longer. They are still furnished occasionally as repairs. The precise form of the tooth was changed in 1926 or 1927 to a structure in which the upper end of the tooth was secured to the bail pivot bolt instead of by an independent bolt.

Mr. Richey: I offer that in evidence as Plaintiff's Exhibit P-63.

Q. Did you compare this model—P-63 with the drawing of Defendant's Exhibit No. 26? A. I have not compared it accurately. I have observed it closely, but not measured the dimensions neatly.

Q. Will you make a comparison and state whether or not they are the same? (Witness does.)

The Witness: By placing the model upon the Exhibit No. 26, and noting the coincidence of the outlines I believe the model is a faithful representation of the device of Exhibit No. 26.

Q. With the exception of the absence of the fragments of the lines illustrated in Exhibit No. 26, the model is traced from that, is it not, from Exhibit No. 26? A. Yes, sir, that would be my belief.

Q. In discussing the third Downie patent, I neglected to ask you to look at the Thew device shown in Defendant's Exhibits Nos. 56, 57, 59 and 60. Will you compare that in structure, mode of operation and results with the construction of the third Downie patent? You can also use this chart No. 43.

Mr. Corbett: Your Honor, if we might interrupt a moment here, I would like to ask leave, in the event we can find and get a fact witness or so regarding the build-

ing of the Morison device and the sale of the Bucyrus bucket,—leave to present that testimony here Monday.

The Court: Any objection to that, Mr. Richey?

Mr. Corbett: The matter came to us so late that we did not have the first hand records.

Mr. Richey: I have this objection to it, Your Honor. It is not material to the case. They said they only made one Morison, and tested it out. Now we have the illustration. There was no public use of it, no use of it. How can it have anything to do with this case, assuming that the thing was tested out. He said he never went ahead with it. It is nothing but another abandoned experiment. What is the use of loading the case down with innumerable abandoned experiments that cannot have any legal effect in the case.

Mr. Corbett: It is a matter of the weight of the testimony and we would like to show that the Morison device was built and tested under actual working conditions and we would like to show that the Bucyrus buckets were built, sold and actually used, provided we can get the testimony to do so. The time is short. We may not be able to do so. We thought it might save the necessity for asking leave to take depositions.

Mr. Richey: My brother did not give me a chance to express my views about Morison. They said they made two, and they were designed for outward arc machines. This case is just loaded down with that kind of thing,—things used for years,—outward arc machines with buckets on them. Why add that? I want to get through with the case. I have some other work to do. I know that Your Honor has. There is no excuse for not having this. They had plenty of opportunity to investigate this thing. They took depositions for a year and a half, something like that; no excuse for delay. And the evidence is cumulative at best. We can go on and try this case for ever if that kind of evidence is admitted here. It is just cumulative evidence and there is no excuse for not producing it before.

Mr. Corbett: This device shows a drop bottom bucket rigidly mounted on a stick, and my recollection of the matter is that in the Cleveland case there was no reference to a prior device embodying a drop bottom bucket on a rigid stick. I think this matter is of sufficient importance, and if we can get evidence, I would like to present it. I do not see that it is going to delay the case to any extent.

Mr. Richey: The Morison bucket, as I remember it, the Morison patent was in the Cleveland case. There was a bucket with a drop bottom on a rigid stick, outward arc.

Mr. Corbett: Downie testified it will not work.

Mr. Richey: And it will not. You proved it will not. You tested it. What is the use to have witnesses down here to say it was successful when the facts show it was not? Here is the successful test in the patent law: A man takes a thing and tests it out and it is so good that he goes and uses it. The matter of success is not a matter of opinion; it is a matter of fact, what happened, and what was done afterwards. They have already proved that all they did was try this thing out and quit it. There is no better evidence of failure than that.

Take this other bucket, this Bucyrus bucket; they made only two of them for a use which was general all over the country. Why pad the case with evidence. Here was a demand for that kind of bucket; they made only two and quit. What is the use of having a man come down here to say the use was successful when we know it was not as shown by the fact that they made only two, when there was a general demand for them.

Mr. Corbett: It seems to be the law in this circuit and in the Supreme Court of the United States, if you make one and it works successfully, it is a public use or it is a successful device. You do not have to show thousands of devices in order to make it successful.

The Court: Bring your witnesses and make it very short because this case has got to be over with.

Mr. Corbett: I will make every effort to get these witnesses.

The Court: Somebody has got to go all through this. I have gone this far. I might as well get it over with and save some other court the trouble.

Q. Go ahead.

The Witness: Referring to chart 33, Exhibits Nos. 56, 57, 59 and 60, to which I have been referred—

The Court: I guess we had better adjourn now.

(Thereupon court adjourned until Monday, March 16, 1931, at 1:30 P. M.)

(On March 16, 1931, at 1:30 P. M., the trial was further adjourned until Monday, March 23, 1931. On March 19, 1931, counsel for all the parties received notice from

the Clerk that the trial was indefinitely postponed. On April 15, 1931, the Clerk notified counsel that the trial would be resumed Monday, May 11, 1931.)

(Hearing commencing May 11, 1931, the last previous hearing was on March 13, 1931.)

The Court: Do you have to go to Cincinnati on Wednesday, Mr. Williams?

Mr. Williams: No, Your Honor, we settled that case late Saturday afternoon.

The Court: Then we will not have to be disturbed about that.

Mr. Williams: No, Your Honor.

The Court: Mr. Richey, I am going to let your second expert answer that general question you wanted to ask him before, and let the other side have unlimited cross-examination after that. You may ask him in what respects he disagrees with the testimony of the first expert, and then let the other side cross-examine him as far as they want to.

Mr. Corbett: May we enter an objection to that, Your Honor?

The Court: Oh, yes, enter all objections you want.

Mr. Corbett: Shall I take that now?

Mr. Richey: You had better wait until later. We have a fact witness, who will probably take a half an hour, we would like to put on now before we put the expert on.

The Court: All right.

Thereupon, the plaintiff called as a witness, W. A. McElhany, a witness, who being first duly sworn, testified as follows:

Direct Examination by Mr. Richey.

My name is W. A. McElhany. I am 35 years of age. I reside at Conway, Pennsylvania. My present occupation is real estate and insurance, and I am also Secretary of the Borough Council of Conway. I have been Secretary of the Borough since January 1, 1928. I have held this office before during the years January 1, 1921, to May, 1923. I have been employed in the real estate and insurance business about eleven years. Before that I was employed by the Pennsylvania Railroad Company.

And prior to that time as a clerk in a grocery store. I went to work as a clerk in a grocery store March 26, 1914. I also did delivery work at that time. I would say that Conway, Pennsylvania, was a town between 1000 and 1200 in the year 1914. I remember just one occasion on which a machine was digging a sewer in Conway. That was shortly after I began to work in a grocery store. I am able to fix that date because I have always kept a memo of the dates when I began and when I ended a position with any one, and not changing very often, I remember them all. I remember the date of the digging of the sewer because when I was delivery clerk we had a horse and wagon, and the streets were torn up quite a bit, and I had a lot of delivering to do by carrying. That is, on the streets where they were digging the sewer. The machine that dug this sewer, I suppose you would call it a ditch digging machine. I had seen steam shovels before that time. The particular difference I noticed between this machine and the ordinary steam shovel was that the shovel on this machine worked towards the machine, whereas the other shovels I had seen worked away from it. That is, this worked like a hoe and the others worked like a shovel. I am not a mechanic. I knew Charles Eppers who worked on the machine at that time. I had known him before he worked on that machine. As I recall he fired the boiler on the machine. I did not know any one else who worked on the machine. I do not know how often I saw the machine working. I would say I saw it practically every day while it was there. As to how close I got to the machine, sometimes in the evenings —I was a young fellow, I think—I was on the machine. This machine worked on Second Avenue, which was the same street that I lived on at that time. The machine dug right past our house. I saw the machine in the day time when it was operating. They told me Mr. Markley was the contractor. I did not know Mr. Markley at that time, but I have come to know him since. I remember a little about the mechanism of the machine besides the fact that it operated as a hoe instead of a shovel. It had a steam power plant on it.

Q. I am going to show you some photographs marked Plaintiff's Exhibit P-48, consisting of four photographs. Will you look at these and state whether or not you recognize any of the people shown in the photographs and, if so, state who they are?

The Court: What is it, P-48?

Mr. Richey: Yes, Your Honor.

A. I don't know that I can identify any of the persons there.

Q. That is, on the first photograph? A. Yes, sir.

Q. Now look at the second one? A. I don't think I can in that one.

Q. On the second one; now look at the third one? A. This is Roy Rhoades.

Q. That is the boy standing by the big traction wheel? A. Yes, sir.

Q. You knew him? A. Yes, sir.

Q. Was he working in connection with the machine? A. I know he was not.

Q. Anybody else you recognize? A. No, sir.

Q. This boy you speak of lived in Conway, did he? A. No, sir.

Q. Where did he live? A. Freedom, Pennsylvania.

(Narrative continued.) In the next photograph Mr. Eppers is shown to the right. He is the fireman. Referring to the same photograph P-48 I recognize the houses and surroundings. This house is at the corner of Second Avenue and Twelfth Street. That is, the house farthest to the left on the first photograph. This house is at the corner of Second Avenue and 11th Street, Conway, Pennsylvania, that is, the house farthest to the right of the photograph. This house I recognize as being on Second Avenue, that is, the one farthest to the left. Looking at the other photographs these are the same houses. I find just part of the house where I was living at that time. It is on the third photograph, the one farthest to the left, showing the corner of the house. I recognize all the houses there, as being on Second Avenue in Conway, Pennsylvania. Looking at the machine in the photograph, it looks like the machine I saw working on the job at that time. When I saw this machine from time to time there were always other spectators around there. Mr. Markley was pointed out to me at that time. Knowing Mr. Markley now I know that he was the man who was pointed out to me at that time. I recognize this as the machine I saw there, that is, the one shown in these photographs.

Q. You said you were secretary of the borough of Conway, Pennsylvania. Have you produced any vouchers here? (Witness does.)

Mr. Richey: Do you want to see them?

Mr. Corbett: Yes, I would like to see them.

(Shown counsel.)

Witness: Yes, four.

Q. What are those four vouchers? Wait a minute. Where did you find these vouchers? A. In the borough safe.

Q. In the safe of the borough of Conway, Pennsylvania? A. Yes, sir.

Q. Who has charge of those records at the present time? A. The Secretary of the council.

Q. That would be yourself? A. Yes, sir.

Q. Who was secretary of the borough of Conway in 1914, if you know? A. Mr. Mench.

Q. What are these vouchers you have produced here?

Mr. Williams: They speak for themselves, do they not?

Mr. Richey: All right. He has already identified them. I offer these in evidence as Plaintiff's Exhibit P—What would be the numbers?

Clerk: 64 is the next plaintiff's number.

Mr. Richey: P-64, P-65, P-66 and P-67.

Q. For what work were these vouchers issued, if you know? A. For a storm sewer on Second Avenue in Conway.

Q. I show you Plaintiff's Exhibit 47, which has been produced here and offered in evidence. Look at it and state if you know what it is? A. Part of the minutes of the borough of Conway.

Q. Who has charge of those minutes? A. The secretary of the council.

Q. That would be yourself? A. Yes, sir.

Q. State whether or not you can connect any part of those minutes up with these vouchers, Exhibits P-64, P-65, P-66 and P-67; and if you can, state what parts of the items refer to the same transactions? A. On page 1 connects with this voucher for $1,625.62. The date of this voucher is April 13, 1914. The second page connects with voucher 2137, dated May 12, for $1,816.11. Page 3 connects with voucher 2165, dated June 10, 1914, for $484.50. Page 4 connects with voucher 2190, dated July 13, 1914, for $692.97.

Q. That is, you find in these minutes, Exhibit 47, the transactions to which each of the vouchers, P-64, P-65, P-66 and P-67 refer? A. Yes, sir.

Q. The numbers of the vouchers are in red ink up in the left-hand corner, are they not? A. Yes, sir.

Q. And those numbers show on the minute book, Exhibit 47? A. No, sir, they do not.

Q. How do you connect them? A. By the amount.

Q. Is that the only way you have of connecting them? A. Well, it states here what this amount here is for; and also states on the voucher what it is for.

Q. Is it customary for the borough of Conway, Pennsylvania, to pay for this work before or after it is done? A. After.

Q. Did you bring with you a profile of the work done on this job in Conway, to which you have referred? A. I did.

Q. Is that part of the records of the borough? A. Yes, sir.

Q. And is under your charge? A. Yes, sir.

Mr. Richey: Do you want to see this, Gentlemen, before I show it to him? (Shown counsel.)

Q. Will you produce a print of that profile—you can just say, "I do." A. I do.

Mr. Richey: I offer that in evidence as Plaintiff's Exhibit P—

Clerk: 68.

Mr. Richey: P-68.

Q. What does this profile show? It shows part of Conway, Pennsylvania, does it not? A. Yes, sir.

Q. What part? A. Principally the street of Second Avenue, from Fifteenth Street to Ninth Street.

Q. That was where this ditching machine worked in the spring of 1914? A. Yes, sir, on part of the—.

Q. Do you know where the machine started and where it finished the work? A. I know about where it started.

Q. About where was it? A. About Fowler Street.

Q. And where was it the work ended with the machine? A. Eleventh Street.

Q. Was that the end of the work? A. That was the end of the sewer work.

Q. I mean the sewer work. About how many lineal feet was that? A. I think—

Q. From the plan? A. From the plan (witness refers plan)—

The Court: How many is it, Mr. Richey, do you know?

A. 1650 feet.

Mr. Richey: That is near enough. That is all.

Cross Examination by Mr. Corbett.

I lived on Second Avenue 22 years. I moved there in April, 1909. I went to work in the grocery store March, 1914. I left there in March, 1917. Part of this sewer on Second Avenue was done by hand. I do not know exactly how much. I would say around two or three hundred feet. I know that much of it was done by hand. There was not any more done by hand.

Q. You noticed, did you not, that part of the work done on Second Avenue during this time you observed with an outwardly-moving skimmer scoop; or do you know what a skimmer scoop is? A. I cannot say I do know what a skimmer scoop is.

Q. Do you remember them taking off the surface of that street with outwardly moving scoop? A. Yes, sir, to grade.

Q. Referring to this voucher of April 13, will you point out the corresponding item on Plaintiff's Exhibit No. P-47? A. What is the amount?

Q. $1,625?. A. It is on the first page (shown counsel.)

Q. Are you able to tell from this voucher in connection with Plaintiff's Exhibit P-47 whether the work paid for there was done by hand or by the machine or by both? A. I can't tell from this.

Q. Can you tell about any of the other vouchers which constitute Plaintiff's Exhibits P-64, P-65, P-66 and P-67? A. As to whether—

Q. As to whether the work was done by hand or by machine? A. I can't from these minutes; but I know from being there.

Mr. Corbett: Objection, Your Honor.

Mr. Richey: Wait a minute. Let him tell what he knows.

Mr. Corbett: I asked a question. He is going beyond the question.

The Court: He has already told what he knows about it: two or three hundred feet.

Q. When was the hand digging of this sewer done? Was it before the use of the machine or afterwards or

during the operation of the back hoe device? A. Before and during.

Q. You observed, did you not, Mr. McElhany, that during the use of this back hoe device several different types of scoops were used, several different scoops were used, did you not? A. Not for digging the ditch.

Q. How much time did you actually observe this machine? Just in passing or what would you say about it? A. Well, I watched it every opportunity I got while it was there. I cannot put any definite time.

Q. You never worked on the machine at all, day in or day out; anything like that? A. No, sir.

Q. In connection with the digging of this stone sewer, do you know just what had to be done? Did they first have to take off the surface of the ground before they started to actually dig the trench? A. I don't just understand.

Q. Was the whole street repaved or paved for the first time? A. Part of it.

Q. Did you see any of those operations? A. Yes, sir, sure.

Q. Do some of the other items contained in Plaintiff's Exhibit P-47 refer to other work besides this stone sewer, or does that entire exhibit relate to the storm sewer? A. No, sir, these are general items of expense of the borough here.

Q. Do they all relate to this storm sewer? A. No, sir.

Q. Do any of them relate to the general job of paving the street? A. There is one for the engineer. (Shown counsel.) Here is one for grading, curbing and paving.

Q. Where was the item you found for paving? A. Here is one for grading, curbing.

Q. Give the page? A. You want the first one first.

Q. The first? A. On page 3. Shall I read all of the items?

Q. Just read the total amount? A. The total amount as paid was $837.46; on page 4, $4,934.84.

Mr. Corbett: That is all.

Mr. Richey: That is all.

The Court: Call your next.

Mr. Richey: Now, if Your Honor please, we took a deposition—you remember the first time Your Honor was taken sick—the deposition of Mr. Markley, by agreement here. We would next like to read that deposition.

DEPOSITION FOR THE PLAINTIFF

Taken at Toledo, Ohio.

Deposition in above entitled causes, on behalf of complainant, The Keystone Driller Company, taken on Tuesday, March 17, 1931, at 11:00 o'clock, a.m., at Room 822 Commodore Perry Hotel, in the City of Toledo, County of Lucas, and State of Ohio, before Wm. J. Fritsche, a Notary Public duly appointed and qualified within and for the county and state aforesaid; said deposition being taken pursuant to agreement of counsel appearing for and on behalf of the respective parties, formal notice of the taking of such deposition and service thereof having been waived.

SAMUEL B. MARKLEY, a witness called on behalf of plaintiff, and being first duly sworn according to law, testified as follows:

DIRECT EXAMINATION by Mr. Edgerton.

My name is Samuel B. Markley. I reside at Beaver, Pennsylvania. I am now 61 years of age and a general contractor. As general contractor my work includes excavating enterprises. I have excavated sewers, foundations, grading, general contract work, concrete work, etc. I have been engaged in this business off and on for the last four years. I have used a Keystone machine on my excavating contracts. I acquired one in 1913. It was steam propelled, with a boom that turned back and forth like this, and up and down, and it had a skimmer bucket, and you would drop it down, and then skim off the dirt. When I said the skimmer scoop goes back and forth I meant it traveled along the boom outwardly, and when you raised it, it would be dropped back. The boom would turn from left to right in a horizontal plane. I first acquired this machine in 1913 for grading streets in Rochester. I used it on that job in the fall of 1913. And then after that the next job was in Conway. The Conway job was undertaken, early April of 1914 or last of March. It was a street grading job with some sewers. Grading first, and then they put in the sewers, and they paved on top of that. When I undertook the sewer job I excavated for the sewer tile and dug a trench.

We started by hand on this job, worked a few days, and there was still frost in the ground, and Mr. Downie

come on the job and told me he had an attachment he could put on this machine that he had sold to me that would dig sewers. So I told him to send it up, and I think he sent it up the same day; Downie or Clutter, I don't know—one of them—I am sure it was Downie though, R. M. Downie, I think. The Clutter I referred to I think his first name was Roy. I am not so sure, but I think it was Roy Clutter. I think there was three or four hundred feet I suppose of this trench in Conway that was dug by hand. A small block, as near as I can remember, was dug. I used the attachment that I have previously referred to to continue the job. I think two or three blocks was excavated with the attachment quite a long time, but I think it was probably. Describing the attachment which I have previously referred to, we used the same machine that I referred to before, and took this skimmer bucket off, and attached the bucket that worked on the end of the boom; put a couple extra pieces on there and attached this on so it would go in between those two pieces, and it worked kind of on a leverage there, and we had a cable run out to the bucket to drop it down, and then we would pull it in to load the bucket, and then would raise it up and turn it around outside and pull the rope to dump it, and then it would come back again, and do the same thing. I might say that there was a stick attached on to the end of the boom, and the bucket was attached on to the end of the stick.

Q. Do you remember any further details of this machine that was used at this time? A. That is, with reference to digging this sewer?

Q. Yes. A. Why, on that same job, of course, we excavated for the pavement, that is, for to get the subgrade out, to receive the pavement, and I kind of think that we probably backfilled that ditch with the skimmer bucket. I ain't sure. We either did that or did it with a team of horses and a scoop.

Mr. Corbett: I object to that as speculative.

Q. What sort of a power plant was on this machine? A. It was a steam.

Q. Do you recall the mechanism provided at the end of the stick for controlling the movement of the same? A. Well, it was a kind of a saddle there, with a wheel on it, that the cable went through, and come back into the machine, to lift it up and down.

Q. Do you know whether or not the excavating bucket on the machine was capable of being dumped or cropped? A. Oh, yes, by pulling a rope.

Q. Do you know who operated the machine? A. O. D. Henshaw.

Q. Do you know who the fireman was? A. He had just been discharged off the railroad, and his name was Epber or something of that sort, Epber, I think.

Q. Spell it, as you recall? A. E-p-b-e-r, I think; just left the railroad company as an engineer.

Q. Do you remember whether or not any one ever visited and witnessed the work of the machine while it was in operation on this job? A. R. M. Downie for one, and I think Clutter was there on several occasions, or during the progress of this work that I understood he was there.

Q. I now hand you four photographs, copies of photographs of Exhibit P-48 introduced in evidence in this case (subject to comparison by counsel), and ask you to state, if you know, what is illustrated therein? A. That is the machine that I had reference to, that I bought in 1913, and used it in 1914 in Conway.

Q. Referring to the group of photographs, will you point out any one you recognize in those photographs? A. Well, the gentleman standing at the side here is R. M. Downie (referring to photograph marked "A"). I identify this man standing at the side as R. M. Downie.

Q. Will you please mark the letter "A" on him? A. All right. (Witness so marks photograph.)

Q. On Mr. Downie's picture? A. Yes, sir.

Q. Referring to the same photograph, will you mark the letter "B", and tell us who else you may find that you know? A. O. D. Henshaw is "B", the operator.

Q. Referring to photograph "B", do you recognize any one on this picture? A. R. M. Downie.

Q. Please mark him "A". (Witness complies.) A. And the operator is Henshaw.

Q. Will you mark him "B" again, please? (Witness so marks.) A. He is the fireman.

Q. Is there any one else there that you know? A. I don't believe I recognize them.

Q. Who is the man back of Mr. Downie? A. I can't just say. I wouldn't say for sure, but I believe probably it is this man Clutter. It looks a good deal like Clutter, but I wouldn't say for sure whether that is Clutter or not.

Q. Do you recognize any one in photograph C? A. The operator is Henshaw, the same as on the other.

Q. Will you please mark him with the letter "B"? A. (Witness so marks.) And the man here at the fire-box in the rear of the machine is Epber.

Q. Will you please mark him with the letter "C"? A. (Witness so marks.) I don't recognize this by-stander.

Q. Referring now to the photograph C, I find the name, "S. B. Markley"; is that your name, and was that your machine? A. That is my name, and my machine.

Q. Now, do you recognize the surroundings, the houses? A. I do. I do, yes.

Q. Where was this picture taken? A. Second Avenue, Conway, Pennsylvania.

Q. And referring to the photographs A and B, do you recognize the dwelling houses in the background? A. On the same street, yes.

Q. Referring to photograph D, do you recognize the surroundings in this picture? A. I do.

Q. And recognize the men in the picture? A. R. M. Downie.

Q. Will you please mark him "A"? A. (Witness so marks.) The operator is Henshaw.

Q. And mark him "B", please. A. (Witness so marks.) And the man at the rear there is the fireman, Mr. Epber.

Q. Please mark him "C". (Witness so marks.)

Q. Do you know who the child was sitting on the pile of brick? A. No, I do not.

Q. Where was this picture D taken? A. That was on Second Avenue, Conway.

Q. Referring now to the photographs A and C, I call your attention to an automobile in the background. Do you know whose machine this was? A. That is my machine; automobile.

Q. What make of automobile was this? A. That was a Michigan.

Q. Do you recall when you disposed of this car? A. In the summer of around—as near as I can tell, around July, 1914; end of July, '14.

Q. Now, do those photographs, A, B, C and D, illustrate the trench that you have previously referred to as being dug in Conway? A. They do.

Q. And this machine actually dug the trench and completed the job upon the same? A. Yes.

Mr. Edgerton: The photographs, A, B, C and D, formerly referred to by the witness, are now handed the notary with the request that they be marked for identification "Plaintiff's Exhibits P-48-A, B, C, and D."

Q. Was the use of this machine in digging the ditch in Conway successful?

Mr. Mahoney: Objected to as leading.

(Narrative continued.) The use and operation of this machine eliminated hand operators on this ditch. I would say that by using this machine we saved about 10 or 15 men around there; 10, 12 or 14. After this Conway job I used this machine for digging ditches with the digging attachment in Midland, and various towns after that in the next three or four years. And the machine I used was the same machine with the same attachments. After that I sold it to a couple of Italians in Portland, Maine; shipped it to them with bill of lading attached, and they never had seen the machine. Bought it right out from me.

Q. Did you ever hear whether or not the purchasers of this machine with the trench attachment used it?

Mr. Corbett: Objected to as calling for hearsay evidence.

A. Yes; Mr. Henshaw told me that the machine was still in operation two years ago.

(Narrative continued.) I was paid for excavating and grading and trenching on this job at Conway. I am the Samuel B. Markley who testified in the Keystone Driller Company vs. The Byers Machine Company suit by deposition in 1927.

Q. Do you recall in that deposition of examining the checks which were produced at the deposition, and which you there identified as being checks in payment for this work at Conway?

Mr. Corbett: Objected to as calling for secondary evidence. The deposition in the Cleveland Byers suit has no bearing on this situation, and the originals of these checks are the best evidence of the checks.

A. I do.

Q. I now hand you a photograph, and ask you to state, if you know, what it is?

Mr. Corbett: We object to the question as obviously calling for the introduction of secondary evidence.

A. That is the checks that I was paid for this work that you just mentioned at Conway.

Mr. Corbett: The answer is objected to as obviously untrue. The photograph of the check is not a check.

Q. In your previous answer you have stated these are the checks. You mean these are a photograph of the checks, do you not? A. This is a photograph of the checks, yes, sir.

Q. Do you recall being paid by check for this work? A. I do.

Q. And was it the practice of the Borough of Conway to pay in advance, or after the work was completed?

Mr. Corbett: Objected to on the ground that the witness is not qualified to state the practice regarding the Borough of Conway.

A. They give me an estimate the first of each month for work completed; the work done during that month was paid for within ten days, in the previous month.

Q. And you know of your own knowledge that you had completed certain portions of the work before you were paid for the same? A. Yes, indeed.

Q. Now, referring to the photographs, will you please read the numbers of the checks, the dates, and the inscriptions on each of these checks, taking them in the order from the top of the page downward?

Mr. Corbett: Objected to, as an obvious attempt to introduce secondary evidence into this record, and notice is given that a motion to strike this evidence from the record will be made at the proper time.

Mr. Edgerton: I will withdraw that question. The photograph illustrating the checks to which the witness has referred in his preceding testimony is hereby offered in evidence as "Plaintiff's Exhibit P-64."

Mr. Corbett: Objected to on the ground of secondary evidence.

Q. Do you remember the character of the soil you encountered on this Conway job? A. It was clay soil.

Q. Did you have any difficulty in the mud moving the machine? A. Why, when we had wet days we put blank under the machine.

Mr. Edgerton: That is all.

CROSS EXAMINATION by Mr. Corbett.

At the time I had this Conway job it was the only job I had there at that time. I was the general contractor on the job. As to how many men I had working for me, they was paving at the same time, you know, and sewer and all, to save time, preparing for pavement. Well, I suppose I had—well I had a quarry, you know, where I got stone out of—I suppose 15, 20 men. I reckon it was—must have been—around a twenty thousand dollar job; I couldn't answer that correctly. I should imagine it was a fifteen thousand dollar job. I had about 7 or 8 squares of paving, besides the curbing and the sewers to put in; I couldn't answer that correctly. I have done so many jobs since then, but I imagine around fifteen or twenty thousand dollars.

Q. You say you had about seven or eight squares. Do you mean one side of a street or one side of a square, is that what you mean, or all around the square, or what? A. No, just block; that is one block, you know, street block; seven or eight blocks, like you start up this street and go up one street to the other, seven or eight.

Q. You had seven or eight blocks? A. Yes.

Q. And before you started in there, had those blocks been paved before? A. No, they had not.

Q. Had never been paved before? A. No, sir; not curbed, either.

Q. About how long did it take you to do that job? A. I imagine I was on there around three months.

Q. Around thre months? A. Hardly three months; run about two months or two months and a half.

Q. And you used the skimmer first; is that the idea? A. For grading, yes.

Q. That is, you took the top off the street with the skimmer; is that the idea? A. I think I did, yes. We generally take that off. It saves that extra digging. I don't know whether I did at that time, but I imagine I did.

Q. How long were those blocks there, do you know, or could you say? A. Oh, I imagine they run from—a block runs from two or five hundred feet. I don't know just what them was. Some of the cross blocks was shorter and some of the others was longer, and some of them might have run longer than that; I couldn't say.

Q. Well, did you have to dig a trench for the sewer the full length of those seven or eight blocks? A. No;

I did not; just on the one main street there, Second Avenue. That run—I think that was four blocks.

Q. And you dug part of that trench by hand, is that right? A. We started in by hand.

Q. You had a lot of other things to attend to on that job besides watching that ditching machine, didn't you? A. Oh, I was generally—I had two foremen, and I was superintendent of the work myself.

Q. How much did you actually see that ditching machine work? A. Oh, I would see it—passed it and worked to the end of it for I couldn't say how many dozen times a day, you know. It was in my sight practically all the time.

Q. Stand and watch it for any length of time? A. Oh, I would stop and see them move back, and see that they was putting the sewers in right, and instructing my foreman what to do.

Q. Do you remember how many feet of this trench was dug by hand? A. Oh, I couldn't say; around one hundred and fifty to three hundred, around in there; I wouldn't say. I couldn't really say, to tell you the truth, that is correct; but there was one hundred or two hundred feet, or maybe three hundred, or might have been only one hundred and fifty, but I know we started that way.

Q. And did you finish that way, too? A. No. I didn't. I finished with the ditcher.

Q. Now, you said that you used the machine at Conway, and then you took the machine to Midland? A. Yes.

Q. Isn't it a fact that you didn't have any ditching at Midland? A. I had three miles in one job, outside of some other jobs besides.

Q. In ditching? A. Yes, sir.

Q. Well, who did the ditching for you? A. How is that?

Q. Who did the ditching for you at Midl[illegible] A. How do you mean?

Q. Did you do the ditching with this machine? A. Yes, every bit of it.

Q. Who did it for you? A. What?

Q. Who run the machine? A. I had several operators on it.

Q. Wasn't Henshaw the only operator? A. He was a part of the time, my recollection the first job I had.

Q. Well, if Mr. Henshaw testified that the ditcher, that this particular ditcher was never used at Midland,

you would say he was right, wouldn't you? A. No, I wouldn't. I would say he was wrong.

Q. That is, with the ditcher scoop on? A. With the ditcher scoop I used the same tools. We just finished the job, at the time I shipped it away.

Q. When was this Midland job? A. Well, we worked in Midland for five years.

Q. Well, if Mr. Henshaw said that after the job at Conway the ditching device was taken off and put in the warehouse, you would think that he ought to know about that, wouldn't you? A. No.

Q. He would not? A. No, sir.

Q. Do you know just what date the Midland job started? A. Indeed, I couldn't tell you. I worked there for five years. I went down and done some work, and then I went away and done another job for a month or two, and then moved back, and did work on and off there for five years. I sewered the big part of the town, and paved the big part of the town.

Q. But as a matter of fact, you don't know, do you, just how soon after this Conway job this ditcher was used at Midland, do you? A. Well, I had several sewer jobs, and I used it on all of them.

Q. Well, any sewer jobs—do you know when they occurred at Midland, or how soon after the Conway job? A. Well, the big job I had there was around in '15.

Q. 1915. A. Yes, sir.

Q. What time in 1915, in the summer? A. In the summer time, yes, sir.

Q. And that is probably the job on which you used the ditcher, isn't it? A. Well, I used it several times there. Used it up to when I sold the machine. Used it every year for a couple years, and then I got a new machine after that; after I sold that, I got a new one.

Q. Now, let's see—you finished at Conway about when? A. In the summer time.

Q. Of 1914? A. Yes.

Q. And then you had another job before you went to Midland; is that right? A. No, my recollection is I moved from Midland to there; done some work and then I moved back.

Q. What work did you do when you left Conway and went to Midland? What work did you do there? A. Why, I had a small sewer job, and a paving job. Then I moved back to Monaca and done some work there, and then moved back to Midland.

Q. How long did you work at Monaca? A. Well, I worked at Monaca several months.

Q. This first job that you had at Midland, after you left Conway, how long a job was that? A. Well, I think it was several months.

Q. What street was it on? A. Well, I think they called it Rice Avenue at that time, and I think it has been changed since.

Q. You can't fix the date? A. No, I couldn't fix the date. I done so much work there, and worked there five years on and off, I couldn't just fix it.

Q. Was it in the summer, or fall? A. Well, we didn't do a whole lot of work in the spring time. When it freezes up, you couldn't do much work in the spring time.

Q. Do you think it was in 1915? A. I done some work there in 1915, and done some work there in '14, '15, '16, '17 and '18.

Q. Were there any changes or alterations made in this ditcher attachment during the first year you had it? A. No, not to amount to anything; might be some little latch. Now that I know of, but it was the same arrangement.

Q. You say a latch change? A. I say, there might have been; I don't know of any changes.

Q. You don't know whether there were any or not? A. I don't know of any changes made, it was practically the same thing when I sold it.

Q. You had some trouble with the latch, didn't you? A. Well, sometimes would break it and get a new one, but that is all, I don't know of any particular changes made on it until I sold it, and it was practically the same thing as when I sold it.

Q. After you took the machine away from Conway, did you have occasion to get a new scoop or any new parts in between the time you left Conway and the time you went to Midland? A. No. I think we got—of course, parts probably come in there. I had two different sizes, you know. I had some narrower sewers in Midland than I had in Conway, and I got a narrow scoop. This was a wide one, about three feet, and then I had one 22 inches wide, and put on this same attachment.

Q. You say the scoop you had at Conway was about three feet wide? A. Yes.

Q. As a matter of fact, you were digging a 26 inch trench there, weren't you? A. Well, you had to dig it—you have to have 6 inches on each side, to get back to put the mortar in and tamp it in.

Q. And then you had a narrower trench at Midland? A. Well, we had both sizes. I had three miles of sewer; some of it was 4 foot sewer.

Q. When did you get your other scoop; you didn't get both scoops at the same time, did you? A. No, no.

Q. When did you get your second scoops? A. I have had four or five since then.

Q. I know, but when did you get your second? A. Well, I think I got that to dig an 8 inch sewer in Midland.

Q. And what year was that? A. I think that was in the fall of '14, because I remember when I moved back it was muddy and cold; when we moved our machine back to that district, we moved it over land on just the wheels, and we had a time getting through the mud.

Q. Then the scoop which you used in Midland was a different scoop? A. No, we used both.

Q. You used them both? A. Yes.

Q. I mean on the job right after you left Conway? A. Well, my recollection is that it was a narrower ditch.

Q. And it was probably in 1915 that you again used the wide scoop in Midland; is that right? A. Well, I believe I used them both down there on the first job, too. I had different sized sewers. I have done so much there—I paved the whole darn street, and I couldn't tell just the date of each different size, but I had two different sizes or three different sizes of scoops, I think.

Q. You are not certain whether you used this particular scoop in Midland during 1914? A. I think I did.

Q. But you are not certain? A. No, not certain.

Q. Now, I wish you would examine these photographs of Plaintiff's Exhibit P-48-A, B, C and D, and state what photograph A shows as to the condition of the trench. Is that the starting of the trench? A. That is—this has been already done. Now, reaching way back here, probably it don't show, but you see here you can see where the dirt had been dug here, too. That is not the start; that is not a photograph of the work starting.

Q. You mean that the trench has been backfilled, is that what you mean? A. Well, no. You see, when you bring this out here, it goes away back here, and catches this.

Q. I am trying to find out what that shows; is that the starting of the trench, or in the midst of digging the trench, in photograph A? A. No, that is in the trench digging.

Q. Well, can you tell from this photograph—you said that you dug two and a half or three blocks with this ditcher? A. Yes.

Q. Now, can you tell from this photograph whether this is the beginning of the digging operation, or whether it is in the middle of those two and a half or three blocks of trench? A. No, this is not the beginning.

Q. That is in the middle? A. No, I don't know as it is; it is after we had started, yes.

Q. That is, of the part that you dug with the machine, with the trencher? A. Yes.

Q. With the digger—with the instroke ditcher? A. Yes, sir.

Q. Now, how about the showing in photograph B? Was that picture taken before the picture in photograph A or after; can you tell that from those surrounding there? A. That was taken after. You see here it is moved back. You see, that was done after.

Q. How shortly after? A. That was just after the photograph of the work you have.

Q. You think it was done the same day; is that the idea? A. I think; it might have been done the next day.

Q. But the same houses are in the picture; is that right? A. Yes, the same houses.

Q. Now, photograph C—was that taken after or before? A. I think that was before this, by the looks of the houses.

Q. Taken before photographs A and B? A. Yes, you see this house here is this house here (indicating), and we were going this way.

Q. Now, how about photograph D? Was that taken before or after the other photographs, or either of them? A. That was taken about one more move. You see, we got by this house; this had another move. Now, he is starting to dig here, you see.

Q. That was taken after this? A. Yes, just about one more move. It is moved back, maybe two moves; we moved back about eight or ten feet at a time.

Q. What was the depth of this trench which you dug with this instroke machine? A. That ditch was, as near as I can tell, about six and one-half feet. You see, it was a two foot sewer went in there, and naturally we would have to have three, three and a half, maybe four feet covering, to be safe to put it in; wouldn't be less than that.

Q. How much dirt was taken out altogether to make that trench, which you say, I think, was six or seven,

or seven or eight blocks long—is that what you said? A. No, no; it was about four blocks, and then there was some little bit dug off of it.

Q. About four blocks of the trench? A. Yes.

Q. How much dirt would you estimate, roughly; how many yards of dirt? A. I would have to figure it; couldn't very well estimate the cubic yards without figuring it.

Q. Well, suppose you figure that; can you do that? A. Well, say there was 2000 feet long by 4 feet wide, or 3 foot 6, by say an average of 6½ or 7 feet—be about a cubic yard a foot, probably; couple thousand yards, I suppose.

Q. Couple thousand yards of— A. Excavation.

Q. —excavation? A. Yes, sir.

Q. That is, for the whole trench? A. For the trench, yes.

Q. And that includes the amount dug by hand at the beginning; is that right? A. Yes; there wasn't much dug.

Q. Well, you said it might have been all the way from 150 to 300 cubic feet? A. Yes.

Q. And the total length of the trench was about how long, would you say? A. Well, I would say couple thousand feet. Part of that sewer was a 3 foot sewer, put in by blocks cemented together like this to form a sewer, and naturally would make more dirt because we would have to dig wider than for 3 foot; 3 foot cement block sewer, that is what it was, the biggest part of it.

Q. Well, you must remember these two and a half blocks that were actually dug by the ditcher, don't you; you said about two and a half or three blocks that were dug by the ditcher; isn't that right? A. Yes, maybe three or two and a half. I think there was four blocks in all, and we dug part of it—I couldn't just state; you know I just dug it, and didn't go back to do any measuring or anything like that.

Q. You don't know the length of any of those squares? A. No, I do not.

Q. Well, the probabilities are that you dug about a thousand yards of dirt with this instroke ditcher; is that right? A. No, more; about two thousand.

Q. Well, two thousand altogether you said for the full trench? A. Yes.

Q. And you said that a length of 150 or 200 or 300 feet— A. Well, 150 feet; that would leave 1850 yards, you see.

Q. Well, 300 feet would leave about 1700? A. Yes.

Q. But you are not sure about the length? A. No, I am not, but that is pretty close to it.

Q. Now, the device which you bought in 1913 was the skimmer scoop. That is right, isn't it, the skimmer machine? A. Yes, the skimmer machine.

Q. And you didn't buy the instroke ditcher until in 1914? A. Yes.

Q. Some time— A. Around the 1st of April.

Q. Did you try this device out before you agreed to buy it, this instroke attachment? A. Well, he priced it to me and I says, "Bring it up," and he brought it the same day when he priced it to me, and I said "I will try it out." He priced it to me, and charged it to me, and I got the bill the next day for it.

Q. He billed you before it was tried out? A. No, we tried it the same day he brought it up. Didn't take long to put it on.

Q. Do you remember when Henshaw left you to go to The Keystone Driller Company? A. I think it was around somewhere after '15, or something like that.

Q. How long did Henshaw work for you? A. Oh, he worked for me several years.

Q. How many years? A. He worked for me two or three years, I reckon.

Q. Do you know when you sold that machine to the Italians in Maine? A. Must have been around—must have been around '16; '16, I think. Either '16 or the fall of '15. I think it was '16. I wouldn't say positive about that now, but I think it was around the first part of '16; maybe it was the latter part of '15.

Q. Did you sell the ditcher attachment with that machine? A. Yes.

Q. Are you still in the contracting business? A. Yes, sir.

Q. Where are you located? A. Well, now, my office is in West Bridgewater, Pennsylvania, and my residence in Beaver.

Q. Will you briefly describe, or describe as fully as you can, the manner in which this back hoe or instroke attachment operated in digging the trench at Conway—just the motions it went through. A. Well, when they would dump it, he pulled it up and that would throw the bucket out, and it would drop down, and then he would draw in his line to fill it and then raise it again and dump it, and then come back in, and when the load was

off, that would throw the ditcher off and come down, and he would fill it again.

Q. You mean he would throw the scoop out to about the position shown in— A. Shown in A; he has the scoop loaded. Now, here in B, the scoop is emptied out here, and that drops down. The weight of this then, when he pulls on this—

Q. Weight of what? A. The weight of this part here (indicating stick), the weight of the stick and the bucket is pretty heavy, you know.

Q. Yes. A. When he drops that down, that sticks in the ground and naturally lets the pressure on here.

Q. That is, the hauling line slack, you mean? A. Yes.

Q. Or the hoisting line, I mean? A. The hoisting line. And then he pulls it with this one, and that fills it, you see, as in A.

Q. And the position shown in photograph B, is that the usual position for the starting of digging? A. Yes. There is the same condition. Already dumped now, and he is coming back.

Q. You are referring to what, now? A. Photograph D.

Mr. Corbett: That is all.

Mr. Edgerton: No redirect; deposition closed.

Deposition closed.

Mr. Edgerton: We offer the deposition in evidence, Your Honor.

Mr. Richey: We offer the deposition of S. B. Markley.

The Court: All right.

Mr. Richey: Your Honor, the defendants also took some depositions in the interim. I presume the next thing to do would be to read them as part of their case. Those depositions were taken in South Milwaukee.

The Court: How do you feel about that, Mr. Corbett?

Mr. Corbett: Your Honor, we took the depositions of about ten witnesses there to prove the sale of a drop bottom bucket, and we have attempted here to make a summary of the testimony of those witnesses. We propose, if agreeable to Your Honor and to the plaintiff, to read that summary—I think it will probably take fifteen or twenty minutes—and get it before Your Honor

in that way. We also have in that connection a moving picture, which was an exhibit in that case, which we should like to have the opportunity of showing before we finish. We are trying to make arrangements for that now. And Mr. Mahoney will read that summary, if that is agreeable.

The Court: All right. Have you got that summary written out?

Mr. Corbett: Yes, Your Honor.

The Court: Why not let me have it?

Mr. Mahoney: It is only in the rough. Maybe some of it can be cut down.

Mr. Corbett: He is going to cut it down.

The Court: All right.

DEPOSITIONS FOR THE DEFENDANTS

Taken at South Milwaukee, Wisconsin.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Bldg.,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of the following persons:

William Bager, South Milwaukee, Wisconsin
Werner Lehman, South Milwaukee, Wisconsin
H. O. Jacobsen, South Milwaukee, Wisconsin
D. P. Eells, South Milwaukee, Wisconsin
C. A. Kelly, South Milwaukee, Wisconsin
Andrew Vahldieck, South Milwaukee, Wisconsin
N. A. McGrath, South Milwaukee, Wisconsin
Noel S. Hayward, South Milwaukee, Wisconsin
J. H. Imse, South Milwaukee, Wisconsin
M. T. Smith, South Milwaukee, Wisconsin

all of whom reside more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before W. H. Roberts, a Notary Public in and for the County of Milwaukee, Wisconsin, who is not of counsel nor interested

in this cause, at the City Hall, South Milwaukee, Wisconsin, beginning on the 29th day of April, 1931, at ten o'clock A.M., and thereafter from day to day as the taking of the depositions may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

CORBETT & MAHONEY,
Attorneys for Defendant.

Dated April 22, 1931.

Service of a copy of the foregoing Notice acknowledged this 23rd day of April, 1931.

RICHEY & WATTS,
Attorneys for Plaintiff.

PRINTER'S NOTE:

A like Notice was issued on behalf of the General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice at the City Hall, South Milwaukee, Wisconsin, beginning on the 29th day of April, 1931, at ten o'clock a.m., before W. H. Roberts, a notary public of the County of Milwaukee, Wisconsin. Counsel for all parties being present.

WILLIAM M. BAGER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is William M. Bager. I am fifty-one years of age. I reside at Milwaukee, Wisconsin. I am vice president in charge of engineering, manufacturing and domestic sales for the Bucyrus-Erie Company. I have been employed by this company approximately twenty-seven or twenty-eight years. I am an engineer. I graduated in 1900 from the Royal Technical Institute of Stockholm, Sweden, the degree given was civil engineer, which is the degree given all engineers graduating from this institution. I do not hold any degrees from any

other college or university. I have been engaged in engineering, manufacturing and sales work while an employee of the Bucyrus-Erie Company. In 1917 and 1918 I was either assistant chief engineer or chief engineer, I cannot recollect. I have held the position of chief engineer for this company. I am testifying under subpoenas in these cases. I am the Mr. Bager listed as one of the patentees of United States Letters Patent 1,249,805 dated December 11, 1917. The Bucyrus company built a dipper like that shown in the drawings of this patent. I recall how the company came to build a dipper of this type.

Mr. John Butler of the firm of Butler Brothers became interested in large stripping shovels such as used prior to that time principally in coal mining, for handling overburden over iron mines in Minnesota. They required a shovel which would be able to dump sticky material in cars, placed either 30 or 40 feet or thereabout above the level on which the shovel would be working or at the same level as the shovel. Mr. Butler wanted to know if the standard dipper such as furnished with the shovels up to that time would be able to handle and dump the sticky material in cars placed on the shovel level; to which question we were forced to say no. He insisted that if this type of shovel were to be used extensively in iron mining it would be necessary to design or develop a dipper which would be able to dump sticky material as mentioned above. The front dumping dipper of the type shown in Patent No. 1,249,805 was conceived that afternoon but we told Mr. Butler that we wanted some further time to consider the design of such a dipper before we were ready to make the definite statement that it would answer his requirements.

We first built a very simple wooden model and later a somewhat larger structural steel model, I believe the size of the structural steel was a two-third yard dipper. I cannot say whether Mr. Butler was given an opportunity to inspect the wooden model. The purpose of building the wooden model was to enable us to form some opinion of the practicability of the device before going to the expense of building a steel model. We were evidently satisfied with the working of the wooden model when we proceeded to build the steel model.

Mr. Mahoney: Printed copy of United States Letters Patent No. 1,249,805, dated December 11, 1917, to Morison, Bager & Kaeser, is hereby offered

in evidence and the notary is requested to mark the same Defendant's Exhibit 115.

Mr. Edgerton: The exhibit is objected to as immaterial, irrelevant and immaterial.

(Narrative continued.) I hereby produce drawing L-881 of the structural steel dipper built in accordance with Defendant's Exhibit 115. The date of this drawing is August 19, 1915, and the title of the drawing is ¾ yard front dumping dipper. The meaning of the designation front dumping dipper is that the front of the dipper or the part of the dipper to which the teeth are attached is hinged to the body of the dipper, held in digging position by a latch and that the material in the dipper is dumped by releasing the latch. As compared with the usual type of dipper for out-stroke machines, the ordinary type of dipper for out-stroke machines has a solid more or less square body with a hinged dipper door which when closed is approximately at right angles to the front of the dipper. On an out-stroke machine the front of the dipper is that portion then to which the teeth are attached, and on an instroke machine the portion of the dipper to which the teeth are attached is generally referred to as the bottom of the dipper I believe.

Mr. Mahoney: The Bucyrus Company drawing L-881, dated August 19, 1915, just produced by the witness is hereby offered in evidence as Defendant's Exhibit No. 116, and the notary is requested to so mark the same.

Mr. Edgerton: The exhibit is objected to as insufficiently proven, and as secondary evidence.

(Narrative continued.) I hereby produce photographs 2783-A, 2783-B and photographs 2733-A, B, C, D, E showing the structural steel dipper which was built in accordance with Bucyrus Company drawing L-881, Defendant's Exhibit 116.

Q. Where were these photographs taken, if you know?

Mr. Edgerton: The question is objected to as leading; the photographs 2783-B, 2733-A, and 2783-A bear indicia printed upon the parts of the machine and on the cab which indicate or suggest the answer to this question.

A. These photographs were taken at South Milwaukee.

Q. Please refer to the indicia referred to by counsel for plaintiff on some of these photographs, and explain the meaning of the indicia thereon. A. While certain parts of the machine have the word "Evansville" stenciled thereon, it does not mean that the photographs were taken at Evansville because we frequently ship experimental machines from our plant at Evansville to our plant at South Milwaukee.

Q. How did you determine that these photographs were taken at South Milwaukee? A. By the buildings.

Q. These photographs truly represent, do they, the front dumping dipper that was built in accordance with Defendant's Exhibit 116, about which you have been testifying? A. They do, as evidenced by drawing No. L-881 being shown for instance on photograph 2733-C.

(Narrative continued.) The drawing L-881 is marked on the dipper in this photograph. It is our method of identifying parts made in our structural department. Drawing No. L-881 bears order No. 18958. That drawing number appears on the dipper in photographs 2733-B, 2733-C, 2733-E, 2733-D. Referring to photograph 2733-B the gentleman shown with his hand on the dipper is Mr. Lehman of our engineering department.

Mr. Mahoney: Photographs 2783-A, 2783-B and photographs 2733-A, B, C, D and E are hereby offered in evidence as a group as Defendant's Exhibit No. 117, and the notary is requested to so mark the same.

Mr. Edgerton: Exhibit 117, and each of the photographs thereof, is objected to as insufficiently proven.

(Narrative continued.) The reason for taking photographs of Defendant's Exhibit 117 is that we always take photographs of interesting new developments. The dipper that is shown in Defendant's Exhibit 117 was tested out by the Bucyrus-Erie Company. It apparently operated satisfactorily, because we later decided to build larger dippers of the same type.

Q. You stated that this particular type of dipper was designed at the request of Mr. Butler. Did Mr. Butler ever order any of this type of dipper from your company? That is, the type of dipper shown in Defendant's Exhibits 116 and 117. A. He did not.

Q. Why did he not place an order for this type of dipper?

Mr. Edgerton: The question is objected to as improper. This witness is not qualified to testify why Mr. Butler did not order the bucket referred to.

A. Mr. Butler informed us that in laying out the work in the mine he found that he very seldom, if ever, would have occasion to dump into cars placed at the level of the shovel. His normal operation was to dump into cars placed on top of the bank, and under such operating conditions the standard type of dipper was preferable to the front dumping type.

Mr. Edgerton: Objected to as hearsay.

Q. Was this type of dipper shown in Defendant's Exhibits 116 and 117 designed to close by momentum after dumping?

Mr. Edgerton: The question is objected to as leading and as soliciting an opinion.

Mr. Mahoney: The question is withdrawn.

Q. Will you please describe the operation of the dipper shown in Defendant's Exhibits 115, 116 and 117? A. A shovel dipper has two principal functions, namely, to dig and to dump material. This dipper acts like any other dipper during the digging stroke. As I have previously mentioned, the material is dumped by unlatching the dipper front, giving it an outward motion which provides an opening for the material to fall through. After the material has been dumped the front closes by momentum.

Q. Will you describe briefly what is meant by momentum closing? A. By momentum closing I mean a pendulum action which swings the door into position where a dipper latch catches it and holds the dipper closed.

Q. Is this the usual way of closing the doors on all dippers on power shovels of various types which have dippers for digging? A. I do not fully understand the question.

Q. Is momentum closure usually resorted to in closing of dipper doors on power shovels such as outward arc machines and inward arc machines with which you are familiar after the spoil has been discharged from the dipper? A. Any shovel dipper on which the door cannot be closed by momentum would not be considered an operative dipper by any user of outward-stroke machines.

The purpose of building the experimental structural steel dipper was to ensure ourselves that the door would close by momentum which test proved that it would.

Q. Do you recall whether or not any difficulty was experienced with the latch holding on this dipper after it was snapped shut?

Mr. Edgerton: Objected to as leading.

A. We naturally went through some experimenting in order to perfect the latch mechanism and to balance the door properly to make the momentum closing foolproof.

Q. In other words, the test showed that the dipper designed in accordance with Defendant's Exhibits 115, 116 and 117 would successfully perform the purpose for which it was designed, namely, for excavating and dumping spoil when applied to power shovels of the type for which it was designed?

Mr. Edgerton: The question is objected to as leading, and I do not believe this is a proper recapitulation of the witness' testimony.

A. The test satisfied us that a dipper of this type did function satisfactorily and as a result of the test we offered to build dippers of this type in connection with inquiries for machines.

(Narrative continued.) The printed copy of United States Letters Patent 1,249,805, Defendant's Exhibit 115 gives my full name as Svante R. W. M. Bager but I only use my last two names. As far as I can remember we received several inquiries for this type of dipper shown in Defendant's Exhibits 115, 116 and 117 but we only built this type of dipper for two customers. The first dipper of this type was sold to the Chile Exploration Company whose main office is in New York, and the shovel on which this dipper was mounted was worked at Chuquicamata, Chile, South America. This company was engaged in copper mining. The reason they required this type of shovel in their mines in Chile, South America, was because they were loading into cars at the level of the shovel, and were afraid that a dipper of standard type would not properly shed the material. This dipper was installed on a 225-B shovel bought by the Chile Exploration Company from the Bucyrus Company. I am familiar with the type of shovels that are usually used for coal stripping and copper mining. The size of the dipper stick used in coal stripping and copper mining shovels,

as to length, compared to the dipper sticks used on shovels for general excavating purposes compare as follows: What is generally known as the stripping shovel carries dipper sticks ranging in length from 48 feet up to 90 feet, while what is known as a railroad type shovel or quarrying and mining type shovel carry dipper sticks seldom over 25 feet in length.

Q. Was the problem of dumping from dipper sticks of shovels owned by the Chile Exploration Company complicated by the length of the dipper stick that made it necessary to have a special type dipper, and, if so, kindly state what the company's problem was as you understood it?

Mr. Edgerton: Objected to. This witness obviously is not qualified to state what the problems of the Chile Exploration Company were or what complications they encountered.

A. The mining equipment of the Chile Exploration Company consisted principally of railroad type shovels equipped with relatively short boom and short dipper sticks. On account of operating conditions which were carefully explained to us by the engineers of the Chile Exploration Company, we agreed with their conclusion that a stripping type of shovel would be the best suited for operations in a certain section of the mine provided a dipper could be designed which would permit loading cars satisfactorily at the level of the shovel. The stripping shovel is designed for wide-range operations by which I mean that the shovel is designed to stand a considerable distance away from the bank which is being excavated in order to avoid damage due to falling rock. It is also designed to dig banks up to 50 or 60 feet in height and to dispose of the material from 90 to 100 feet from the center line of the shovel. On account of these requirements it is necessary to provide a machine with a relatively long boom and long dipper stick. The shaft mounted on the boom which manipulates the dipper stick is generally called the shipper shaft. On account of the aforementioned requirements it is necessary to locate the shipper shaft a considerable distance from the heel of the boom which brings it high up into the air. When dumping into cars at the level of the shovel the front of the dipper on account of the high shipper shaft is in a position so near horizontal that the material in the dipper remains lodged on the dipper front instead of dropping through the dipper opening. It was therefore ob-

vious in the case of the shovel for the Chile Exploration Company that unless a special dipper were designed a stripping type of shovel would not be suitable to their conditions. We solved this difficulty to the entire satisfaction of the Chile Exploration Company by furnishing them a dipper of the front opening type.

(Narrative continued.) With the front opening type of dipper the difficulty with stripping shovels which I have explained was experienced with the use of the usual type dipper in use on outward arc machines on account of the dirt laying on the dipper front was overcome by dropping that dipper front so that the dirt would become dislodged. The dipper which we furnished the Chile Exploration Company for the 225-B Bucyrus stripping shovel is shown on our drawing 35576 dated January and February, 1918. The title of the print to which I have just referred is "General drawing of 6-B front dumping dipper." The designation on the drawing "1-2145" refers to the Serial Number of the machine which was a 225-B revolving shovel. This was the type of shovel that this dipper was furnished for. The order number appearing on this drawing is 18641.

Q. Will you kindly explain how the front dumping dipper shown on drawing No. 35,576 compares with the front dumping dipper shown in Defendant's Exhibits 115 to 117, inclusive? A. The general design of the two dippers is the same; one was made of structural steel, the other of castings.

Q. Is there any difference between the shape or design of the front of these dippers? If so, kindly state what these differences in shape or design are?

Mr. Edgerton: The question is objected to. The drawing and photograph are the best evidence of what is shown therein.

A. In general the design is identical. However, the dipper shown on photographs, Exhibit 117, was made of structural steel as inexpensively as possible to demonstrate the principle of the front dumping dipper, while the dipper shown on blue print 35,576 is a heavy, sturdy all-cast dipper designed for continuous operation.

Q. Does the dipper shown in Drawing 35,576 have any corner or side rake teeth thereon?

Mr. Edgerton: Objected to as leading.

A. It had corner teeth designed for side cutting.

Q. Was this dipper designed for momentum closure after dumping?

Mr. Edgerton: Objected to as soliciting opinion.

A. It most certainly was.

Q. What size dipper was this shown in Drawing 35,576? A. Designation 6-B shows that it was a six cubic yard dipper.

Q. Was the dipper built by the Bucyrus Company in accordance with Drawing 35,576 for the Chile Exploration Company? A. As far as I know it was, because our general assembly drawings are nearly always prepared after the detail drawings have been made, checked and approved.

Q. Can you produce any photograph to show the dipper built in accordance with this Drawing 35,576? A. Photographs 3049-A, B, C and D show this dipper.

(Narrative continued.) I am able to state that the photographs show the particular dipper in drawing 35576 apart from the dipper's resemblance to the drawing, because photograph 3049-C shows order No. 18641 painted on the dipper back casting. The same order number appears on drawing 35,576. Photograph 3049-A shows the pattern number of the dipper front 35,575-A, reference to which pattern number also appears in the legend at the upper right corner of Drawing 35,576.

Mr. Mahoney: The Bucyrus drawing No. 35,576, dated January 31, 1918, entitled "General drawing of 6-B front dumping dipper," is hereby offered in evidence as Defendant's Exhibit No. 118, and the notary is requested to so mark the same.

Photographs 3049-A, B, C and D, just identified by the witness as photographs of the dipper manufactured by the Bucyrus-Erie Company in accordance with Bucyrus drawing No. 35,576, are hereby offered in evidence as a group as Defendant's Exhibit No. 119, and the notary is requested to so mark the same.

Mr. Edgerton: Exhibit No. 118 is objected to as secondary evidence and as insufficiently proven. The Exhibit No. 119, and each and singular part thereof, is objected to as insufficiently proven.

(Narrative continued.) I was never in Chile so I never saw the dipper shown in drawing 35576 in operation, but I have seen a moving picture of the dipper in operation. The showing in this moving picture was of

such a nature that I was able to identify the machine and dipper as that shown in Defendant's Exhibits 118 and 119. I do not recall the date that the dipper shown in Defendant's Exhibits 118 and 119 was manufactured and sold to the Chile Exploration Company. The type of power used on 225-B shovel for which this dipper was furnished was electric power as far as I can recollect.

Q. In your opinion is the type of front dumping dipper shown in Defendant's Exhibits 118 and 119 suitable for use on either forward arc or inward stroke shovels requiring a front dumping dipper?

Mr. Edgerton: Objected to. The question obviously calls for an opinion.

Mr. Mahoney: The witness has qualified as being an engineer of long experience and qualifications in the excavating art and certainly his opinion is admissible.

A. The dipper as shown in this exhibit is certainly suitable for forward arc shovels as demonstrated by actual operations in the field over a long period of time. I personally do not see why the digging or dumping of a dipper should be influenced by the location of the shovel as a whole, be it in front of or behind the dipper. The dipper is controlled by a digging cable and a dipper stick. The digging cable acts in the direction of the motion of the teeth and the dipper stick controls the bite that the dipper is taking into the bank. In either case the front would have to be balanced for momentum closure.

Q. In other words, it is your opinion that a dipper of the type shown in Defendant's Exhibits 118 and 119 could be used as desired upon either forward arc or inward arc shovels, is that correct? A. I would not say that the dipper built exactly to these drawings would be applicable to an inward stroke shovel because the details of same are definitely designed to suit an outward stroke shovel, but I believe that with slight modifications in the detailed design a dipper of this type can be applied to an inward arc shovel. In the designing of excavating machinery there is no unit or part which needs more careful study as far as details are concerned than the dipper because it is the one part of the machine which actually does the excavation, carries the excavated material and dumps it where and as desired.

(Narrative continued.) The dipper shown in drawing 35576 was mounted on a dipper stick in the usual way, two lugs at the bottom of the back casting were

used for anchoring it to the dipper stick end casting, while two forged braces with adjustments for altering the pitch of the dipper were used for securely anchoring the top of the dipper to the dipper brace casting mounted on top of the dipper stick. This was a rigid connection. We sold a dipper like that shown in Defendant's Exhibits 118 and 119 to the Oliver Iron Mining Co. subsidiary of the United States Steel Corporation, which dipper they expected to use in connection with some unusual stripping in connection with the consolidation of the Hull-Rust & Sellers pits at Hibbing, Minnesota. This was in addition to the one that was sold to the Chile Exploration Co. The dipper sold to the Oliver Iron Mining Company was subsequent to the sale to the Chile Exploration Company. The reason our company did not sell any more of these particular type dippers is because there are no particular advantages of this type of dipper over the standard type on railroad type or quarry and mining type shovels. On the other hand, stripping type shovels are so expensive as compared with the smaller type that they are only purchased in connection with stripping operations where the shovel is merely overcasting material or where the shovel is used for loading into cars placed a considerable distance above the operating floor of the shovel. In other words, practically all stripping shovels are dumping with the dipper in a high position under which operating conditions the standard type of dipper functions more satisfactorily than the front dumping dipper. We occasionally sell stripping shovels for quarrying where the stone or rock is dumped into cars on a level with the shovel but as rocks and stones have no tendency to stick in the dipper the slow dumping of the standard type of dipper when dumping into a car 12 or 13 feet high with the front of the dipper only at a slight inclination gives the operator better control of the dumping and of course saves the cars because the rock is eased into the cars rather than dropped a considerable distance. Were we today to receive an inquiry for shovels to handle stick material and dumping low we would unhesitatingly quote on a dipper of the front dumping type because it is the only dipper designed today which will function satisfactorily under such operating conditions.

Mr. Edgerton: The last portion of the answer is objected to as hypothetical.

Q. When you refer to front dumping type, I presume you refer to the type of dipper shown in Defendant's Exhibits 118 and 119, is that correct? A. I do.

Cross Examination by Mr. Edgerton.

G. A. Morison is vice president of the Bucyrus-Erie Company in charge of the commercial and financial department. He is one of the patentees on United States Letters Patent No. 1,249,805. He is in South Milwaukee today. The other joint patentee of that patent O. F. Kaeser died several years ago. Mr. Kaeser's position with the Bucyrus Company in 1917 was mechanical draftsman. He was exceptional in this line and I used him exclusively for layout work on designs. I could not tell you if he made the layout of drawing Defendant's Exhibit 116. My part in the layout of Exhibit 116 was that I prepared a pencil sketch from which our patent application was drawn and from which the experimental dipper was sketched. As to whether I saw drawing Defendant's Exhibit 116 made it's so long ago that I can't say that I did. I take it for granted that I did see this drawing, although I cannot make a definite statement that I did see it as in my capacity at that time I did not have sufficient time to enable me to exercise supervision over detailed designs. I did not supervise the construction of the structural steel bucket illustrated in photographs Defendant's Exhibit 117, because at that time I had no connection with the manufacturing department.

Q. Then when you allege the bucket illustrated in Photographs, Exhibit 117, was built in accordance with the drawing, Exhibit 116, you rely solely upon mark L-881 and 18958 appearing on the photograph of the bucket, and the company's practice or precedence of so marking; is that correct? A. That is not correct, because our manufacturing department was not authorized to manufacture anything or make any changes in design except as instructed by the engineering department. If any changes had to be made by the manufacturing department the engineering department would have corrected the drawings accordingly and issued revised instructions to the manufacturing department.

Q. I understand that your foregoing answer relates to your shop or factory practice; but I am asking you of your own personal intimate and actual knowledge of this drawing, Exhibit 116, and of the bucket illustrated in Exhibit 117, whether or not you can state the bucket

was built in accordance with the drawing? A. As I personally did not go into the structural shop, shear off the plates, punch the holes, heat the rivets and drive them, it is impossible for me to say that the bucket was actually built as shown on the drawing.

(Narrative continued.) Referring to Defendant's Exhibit 118 I recollect very well supervising the detailed designs of this dipper and approving the general design of the dipper before it was detailed. I did not supervise the construction of the bucket shown in Defendant's Exhibit 119 as at that time I was not directly connected with the manufacturing department. Referring to Defendant's Exhibit 117 and the part I took in the test of that bucket I would say I took very little part if any, as the design and test of that dipper was placed in the hands of one of my assistants who assumed full responsibility for perfecting the invention. I cannot answer definitely whether I saw this test or not, but I have a very vivid recollection of seeing this particular shovel in the test yard, and of discussing the minor problems that came up in connection with the test with the engineers directly responsible for carrying out the test and the development. It must be remembered it was sixteen years ago since this test was conducted.

Q. Then the observations and answers you made in direct examination regarding this test were based upon what the other people told you, is that correct? A. As I mentioned before, I believe I saw this test conducted. In any event the results of the test were discussed with me and the next steps in our development of this dipper were formulated and approved. It must be borne in mind there was nothing radically new in this development. We could have built quantities of this dipper without any test, had we been able to figure out accurately on paper the momentum closing. The test was conducted principally to determine that the front of the dipper would swing into closing position and latch upon dumping the material. Having that assurance from the engineer conducting the test I could have learned nothing further about the dipper had I actually conducted the test personally.

Q. You are not sure whether or not you saw the test conducted on the bucket, Exhibit 117?

Mr. Mahoney: The witness has given his best recollection in his previous answer and stated that he be-

lieved he saw the test, and is positive that he saw the machine in the yard.

A. I am not positive that I saw this test.

Q. Now, read XQ. 98 and kindly answer the same.

Mr. Mahoney: I believe the witness has already answered that question.

A. I do not see how I can answer this question any plainer than I did.

Q. Now, you have stated that you are not positive that you saw the test made. In direct examination you also made observations about the result of the test. Now, all I am getting at is, were these observations based upon what your engineers or those who made the test told you? A. Again I must repeat that my connection with the engineering department at that time was chief engineer or assistant chief engineer. In such a position it is obvious that I could not give personal supervision to the thousands of engineering matters which had to be handled and decided every month, and I fortunately learned years ago to trust my assistants' judgment better than my own. So that in speaking of results of tests, the opinions of and facts disclosed by the engineers in actual charge have been synonymous with my opinion as far as final results and recommendations are concerned.

Q. I don't understand your answer. Do you mean the results of the test, the opinions and facts disclosed by the engineers were the basis for your testimony in direct examination?

Mr. Mahoney: The witness' direct examination speaks for itself. This question is obviously improper in that no particular part of the witness' direct examination is called to his attention. The witness has testified that he was either chief engineer or assistant chief engineer at the time these particular tests were made and believes he saw the tests although he is not positive of the fact. I don't see how this type of cross-examination is going to get anywhere because I think the witness had answered the question several times.

Mr. Reed: In addition to what Mr. Mahoney has said, it is to be noted that counsel is evidently trying to get a yes or no answer to a question which is not capable of such an answer. The witness has stated that he believes he saw these tests conducted, but is not positive. If he saw them his conclusions are based on personal observation. He further states that he definitely

remembers discussing the tests with his assistants and formulating the next steps to be taken, so that in this manner he had direct knowledge of the tests. Under such conditions it is obvious that XQ. 98 cannot be answered yes or no.

A. The only definite answer I can give is that the basis for my testimony in regard to the test of the 2/3 yard structural steel dipper was either personal observation or consultation with the engineer in charge of the test.

Q. In direct examination in response to Q. 57 you referred to the operating conditions which were carefully explained to you by the engineers of the Chile Exploration Company. Did those engineers visit your factory? A. I do not remember.

Q. Did they convey this information to you by correspondence? A. In the sale of excavating machinery where special features are involved the manufacturer would never be able to make recommendations for special equipment unless the operating conditions were fully explained to, and understood by, the manufacturer. In the case of the Chile Exploration Company I had several interviews with Mr. Motter (title unknown) who at that time and as far as I know still acts as a go-between between the operating force in Chile and the manufacturers of equipment. The customer's engineers present their problems to Mr. Motter if they cannot themselves solve them and Mr. Motter calls in manufacturers, puts the problems before them and in such manner tries to arrive at a solution. Furthermore, we have had a number of erecting engineers, local sales representatives and engineers from our engineering department visit their mines. The negotiations for machines such as the 225-B generally extend over a period of many, many months, and I dare say that our foreign department has in their files today complete information in writing regarding the conditions which caused us to offer this front dumping dipper for their machine No. 225-B. Had we not known their operating conditions we never would have offered such a dipper.

Q. Is Mr. Motter a broker? A. No.

Q. You said he is a go-between. What did you mean by that? A. Mr. Motter is an engineer who at the time of our negotiations for this machine was, and as far as I know still is, in the employ of the Chile Exploration Company.

Q. Where is Mr. Motter located? A. In the City of New York.

(At this point an adjournment was taken to 10:00 o'clock A. M. of the next day, Thursday, April 30, 1931.)

(Thursday, April 30, 1931, 10:00 o'clock A. M., deposition session resumed.)

Q. Responsive to Q. 57 in direct examination after your comments on the problems of the Chile Exploration Company you stated "We solved this difficulty to the entire satisfaction of the Chile Exploration Company by furnishing them a dipper of the front opening type." Did the Chile Exploration Company write you or your firm any letters which caused you to base your conclusions in this manner? A. I do not now remember any letters written by the Chile Exploration Company on this subject. Were any letters written on the subject they would have been addressed to our foreign and export department, and would probably not have come to my attention.

Q. Then your opinion or observation was based on what Mr. Motter or the foreign representative of Bucyrus told you, is that correct? A. I cannot state definitely from whom I received the information as to the satisfactory operation of the dipper, but I do know that the dipper was in operation for a long period of time. I have also seen a moving picture of the shovel in operation equipped with the front dumping dipper which picture clearly demonstrates that the dipper dug the material, carried it and dumped it satisfactorily and that the door closed by momentum.

Q. Did you see this moving picture made? A. I did not.

Q. Did you ever examine the film to see whether splices were made in the same? A. I did not.

Q. Apart from viewing the moving picture referred to in your answer to XQ. 109, you have no other basis for the statement "I do know the dipper was in operation for a long period of time" except as to what you were told, is that correct? A. I have a very distinct recollection that repair parts were furnished for the dipper which would indicate that the dipper had been in service for a long period of time.

Q. Have you any invoices or bills of lading that you can produce relating to these repair parts? A. I have not, but our repair sales division has a complete record of all repair parts furnished for our machines.

Q. Referring again to Defendant's Exhibit 116, I believe you have stated that you were not sure whether or not you saw the test made on this bucket, but that you remembered seeing it in the test yard. Where was this test conducted? A. At our South Milwaukee plant in what is now our structural steel storage yard south of the structural shop.

Q. Are you acquainted with Mr. Walter Ferris? A. I am.

Q. Do you know whether or not he was ever employed by the Bucyrus Company or its successor, the Bucyrus-Erie Company? A. He was.

Q. Do you know whether or not he had anything to do with the test of the bucket illustrated in Defendant's Exhibits 116 and 117? A. I do not remember.

Q. Now, this bucket illustrated in Exhibit 119 was built from castings, was it not? I refer to the main body of the structure. A. That is correct.

Q. What were the dimensions of this bucket? A. The dimensions of the dipper referred to in Exhibit 119 are shown on blue print 35,576, Defendant's Exhibit 118.

Q. Do you know what the weight of this bucket was? A. I do not.

Q. Can you find out?

Mr. Mahoney: Objected to as immaterial.

A. The invoice for the dipper or the shipping document, or both, will undoubtedly give the weight of the dipper.

Q. Can you estimate the approximate weight of the bucket illustrated, for instance, in photograph 3049-C? A. As I recollect it a standard type 6 yard shovel dipper weighs approximately 20,000 pounds. This dipper being all cast construction probably weighed a trifle more than 20,000 pounds.

Q. The 6 yard standard dipper referred to in the previous answer weighing 20,000 pounds, is that of structural steel? A. The standard 6 yard dipper has a cast front cast back, and structural plate sides. I am not so sure of the weight of the 6 yard standard dipper, but the weight can be readily ascertained if desired.

Q. Referring again to photograph 3049-C which, as I understand, had cast side plates, would not the comparative weight of this bucket with the standard bucket be more than a trifle more in weight?

Mr. Mahoney: Objected to as immaterial. The witness has already stated his recollection of the weight of

the bucket, which he stated was a trifle in excess of the standard type.

A. While the standard bucket has plate sides it also has heavy bail lug castings attached to the side plates for anchoring the dipper bail. It has heavy top and bottom structural steel bands for reenforcing the plate sides and I doubt that the all cast construction is much heavier than the composite cast steel and structural steel construction.

Q. Do you know the length of the boom of the machine upon which the bucket shown in Exhibit 119 was used? I refer to the machine of the Chile Exploration Company. A. I cannot give you the length of this boom without referring to the records, as we have several standard booms of different lengths for each size of stripping shovel.

Q. Please read your answer to Q. 57 and state if you can approximately what you referred to when you said it is necessary to provide a machine with a relatively long boom? A. By a relatively long boom I mean a boom approximately 75 to 85 feet long.

Q. Are you prepared to state that the boom on the Chile Exploration Company's machine was substantially 75 to 85 feet long? A. That is approximately correct.

Q. Approximately how long was the dipper stick which was employed to support the bucket shown in Exhibit 119 of the Chile Exploration Company? A. As I recollect the standard front end equipment of the 225-B stripping shovel at the time this particular shovel was sold to the Chile Exploration Company was an 85 foot boom, 58 foot dipper stick, and 6 yard dipper. The records will disclose if this combination was actually furnished with the shovel.

Q. What was the weight, respectively, of the boom and of the stick to which you have just referred? A. Building shovels ranging in size from ½ cubic yard to 18 cubic yards makes it impossible for me to remember weights of shovels as a whole or of individual units and parts. We have, however, in our file complete records which I will gladly refer to and which will enable me to answer your question correctly. An offhand statement in regard to the weight of the Chile boom and dipper stick would be a mere guess.

Q. I would like to have weights of the stick and boom we have referred to, and will ask you to produce the same.

Mr. Mahoney: Objected to as being immaterial and irrelevant and outside the direct examination of this witness.

Q. Please refer to your answer to Q. 80 and state if you know what size dipper you referred to therein. A. As I recollect it, this dipper was a 6 yard dipper.

Q. Was this dipper used on an outward arc machine? A. This dipper was built for an outward arc machine.

Q. Referring to Exhibit 116 and Exhibit 118, do you know whether or not Mr. Walter Ferris supervised making either of these drawings? A. I do not remember.

Q. Did Mr. Ferris report to you? A. I at one time reported to Mr. Ferris.

Q. Did you report to Mr. Ferris at the date upon which these drawings were made? A. Mr. Ferris at one time held the position of chief engineer at which time my title was assistant chief engineer. Mr. Ferris was later made consulting engineer of the company at which time I was promoted to chief engineer. While Mr. Ferris was consulting engineer of the company and I was chief engineer we both reported directly to the president. I do not remember offhand what our titles and positions were in 1918.

Q. Do you know Mr. John Butler, to whom you have referred in your direct examination? A. I used to know Mr. Butler very well. He died several years ago.

Q. Are you now prepared with engineering data obtained from your factory records to state the length of the boom, the weight of the same, the length of the stick and the weight of the same, the weight of the bucket referred to previously as the standard bucket and as the cast bucket for the Chile Exploration Company? A. I am.

Q. Will you please do so? A. The boom furnished for the Chile Exploration Company's 225-B shovel was 80 feet long and weighed approximately 37,000 pounds. The dipper sticks were 58 feet long and weighed 33,470 pounds. The 6 yard standard dipper with plate sides weighed 19,768 pounds. The 6 yard front dumping dipper for Chile weighed 19,215 pounds.

Mr. Edgerton: Cross Examination closed.

Deposition closed.

WERNER LEHMAN, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Werner Lehman. I reside at 748 Michigan Avenue, South Milwaukee, Wisconsin. I am fifty-three years of age. I am chief engineer of the Bucyrus-Erie Company, South Milwaukee. I graduated from the Technicum School, Burgdorf, Switzerland, with the degree of mechanical engineer. I am testifying under subpoenas in these cases. I have been employed by the Bucyrus-Erie Company or its predecessor for twenty-five years. I have seen a dipper built in accordance with the Bucyrus Company drawing L-881, at the South Milwaukee plant. Photographs Defendant's Exhibit 117 show the experimental dipper mentioned on the drawing L-881 and tested on the 14-B shovel in the north yard of the Bucyrus-Erie plant at South Milwaukee, at that time the Bucyrus Company. I was present when these photographs were taken. One of the photographs shows my picture, that is photograph No. 2733-B. In this test the dipper was successful in excavating and unloading the dirt. The front of this dipper was closed after it had unloaded the dirt, in high position by gravity, and in any other position it closed by momentum, either shaking on the handle or hoisting or unloading the dipper. That has the effect of snapping the dipper front close, and latching it. The only man I recall besides myself that was present at this test was O. F. Kaeser who at that time was one of my assistants. There were other people at the test but I cannot remember exactly who these people were, they were shop men and officers of the company. This dipper was operated as follows. The dipper was built especially to suit request for dumping on the level of the machine into cars with large revolving shovel. Before producing a full sized dipper for this large revolving shovel it was decided to fabricate an experimental dipper suitable for one of the shovels at our disposition. The test had to show that we could dump this dipper successfully with the dipper handle in an angle of about 40 to 60 degrees from the vertical. The test dipper did show that our expectations were fulfilled. The dipper dumped clean in the positions mentioned and could be closed or latched before the next digging operation. At the time these tests were conducted on dipper Defendant's Exhibit 117 I was mechanical engineer,

responsible for the design of all Bucyrus Company products.

Q. In your answer to Q. 22 you have stated that the experimental dipper was built for the purpose of testing this type of dipper in view of a possible use of such a type of dipper on a large revolving shovel. Did the Bucyrus Company build a dipper of this type for use on a large revolving shovel, or similar to this type? A. They did.

Q. Do you recall to whom the first large dipper of this type was sold? A. The Chile Exploration Company.

Q. Do you know where the dipper was intended to be used? A. It was intended to be used in their copper mines in Chile, South America.

Q. I now hand you a blue print, and ask you to state what this blue print shows; this blue print has been introduced here as Defendant's Exhibit 118.

Mr. Edgerton: That is objected to as leading.

A. This blue print shows the general drawing of the dipper for the Chile Exploration Company.

Q. Does your name appear on that drawing? A. It does.

Q. What, if anything, did you have to do with the design or drawing up of the blue print in question? A. As mechanical engineer I was responsible for the proper design of that dipper. It followed closely the design of the experimental dipper.

Q. What type of machine was this dipper designed for? A. For a 225-B revolving shovel.

Q. Does the serial number of this particular machine show on this drawing in any place, and, if so, give the number? A. The serial number of the machine is shown on the drawing as 1-2145.

(Narrative continued.) My name is signed on the drawing as having approved the dipper appearing on blue print 35576, Defendant's Exhibit 118. The dipper was manufactured by the Bucyrus Company in accordance with the drawing Defendant's Exhibit 118. I saw this dipper after it was completed. The photographs Defendant's Exhibit 119 show the main parts and the assembly of the dipper, as manufactured in our South Milwaukee shop. The size of the dipper shown in Defendant's Exhibits 118 and 119 was 6 cubic yard capacity. This dipper was not tested out in the Bucyrus yard

before it was shipped, because we had no machine available to handle such a dipper as such machines are not fully erected in our shop. They are so large that they are only erected and tested out at the place they are to be used. The dippers shown in Defendant's Exhibits 118 and 119 had corner or side rake teeth thereon. I have indicated the location of the side rake teeth by the letter A on photograph 3049-A. The term front dumping dipper is used to distinguish this dipper from the usual bottom dumping dipper where the bottom is hinged permitting the opening of the dipper, while in the front dumping dipper the dipper front is hinged to open for the discharge of the dipper contents. I have indicated on drawing 35576 the point where the dipper front is pivoted by the word "hinge" and an arrow. The part of the dipper that is referred to as the front is shown on Defendant's Exhibit 118 as item No. 2 and is marked "dipper front." This dipper is attached to the dipper stick by four pins; two at or near the bottom of the dipper connecting with the handle end casting, and two near the top of the dipper connecting to the handle by means of two dipper braces. This is considered a rigid connection. This dipper was designed to close after unloading the spoil in the following manner. The center of gravity of the hinged dipper front is a considerable distance below the hinge pin. The face of the dipper front, therefore, creates a moment on the hinge pin which creates a swinging motion of the dipper front as soon as the center of gravity is changed in relation to the hinge pin. This momentum makes the dipper front swing and close the dipper. After the dipper front has been dumped and the dipper slammed closed by momentum it is held in such closed position by a latch. This dipper was shipped to the Chile Exploration Company I think in the year 1918. Walter Ferris was chief engineer at the time this Chile Exploration dipper was manufactured and sold.

Cross Examination by Mr. Edgerton.

Q. Did you see these photographs, Exhibit 119, taken?

Mr. Mahoney: Objected to as immaterial.

A. I do not remember being present when the photos were taken. I inspected the dipper and its parts before shipment.

Mr. Edgerton: Cross examination closed.

Deposition closed.

N. A. McGRATH, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is N. A. McGrath. I am forty-one years of age. I reside at 2889 South Kinnickinnic Avenue, Milwaukee, Wisconsin. I am secretary and comptroller of the Bucyrus-Erie Company. I have been employed by this company a little more than twenty-four years. As secretary and comptroller I am in charge of the accounting department.

Q. Do you know what the practice of the Bucyrus-Erie Company is as to designating machines that are shipped out from the plant; do they bear any identifying mark of any kind for record purposes? A. Yes. Each machine has a serial number commonly referred to as a machine number or shop number.

Q. Is this machine shop number carried through the company's records, then, for reference as to that particular machine? A. Yes.

Q. It has been testified here that a machine bearing serial No. 1-2145 was manufactured and sold to the Chile Exploration Company. Can you produce an invoice from the records of the Bucyrus-Erie Company on the machine number above referred to showing shipment or sale of this particular machine to said company?

Mr. Edgerton: Objected to as leading.

A. If you are referring to 225-B electric shovel bearing Bucyrus Company shop No. 2145, I have.

(Witness produces invoice.)

Q. What is the number of the invoice you have just produced, and its date? A. M-56735, and its date is July 23, 1918.

Q. Who was the invoice billed to?

Mr. Edgerton: I object. The paper speaks for itself in respect to these questions.

A. Chile Exploration Company, New York, New York.

Q. Where does it show shipment was to be made to? A. Antofagasta, Chile.

Q. What is your order number and the customer's order number shown on this invoice?

Mr. Edgerton: The same objection. The paper is the best evidence.

A. Our order number 10892, and the customer's number 10583 requisition CX-10329.

Q. Will you kindly read into the record the description of the merchandise called for by the invoice? A. One 225-B knock down electric shovel No. 2145.

Q. What is the total amount of the invoice to which you have been referring? A. $78,550.00.

Q. I now refer you to Defendants' Exhibit 118, and ask you to state if the machine number shown on this exhibit corresponds with the machine number shown on the invoice? A. Yes.

Q. Do you know the purpose of the numeral that appears before the number 2145? A. No.

Q. The machine number, however, shown on blue print, Defendants' Exhibit 118, is the same as that shown on invoice M-56735, is that correct?

Mr. Edgerton: The witness has not been qualified to interpret the engineering records, and the answer could at most be only speculative; therefore, the question is objected to.

A. Yes.

Q. What is the practice of the Bucyrus-Erie Company as to the date appearing on the invoice? A. The date at the top of the invoice in typewritten form indicates the date on which the material is shipped from our plant, and the date near the bottom of the invoice indicates the date on which the invoice was mailed to the customer.

Q. Then according to invoice M-56735 the 225-B shovel No. 2145 was shipped to the Chile Exploration Company on July 23, 1918, is that correct? A. Yes.

Q. Is this a duplicate original Bucyrus-Erie Company invoice for this particular shipment to the Chile Exploration Company? A. It is the invoice prepared simultaneously with the invoice mailed to the Chile Exploration Company, and was issued by Bucyrus Company, one of the predecessors of Bucyrus-Erie Company.

Q. Is this record taken from the files of the company over which you have supervision and charge? A. Yes.

Q. Was this invoice made in the regular course of business? A. Yes.

Q. I now hand you what purports to be photostatic copy of the invoice which you have just produced, and ask you to state whether it is a true and correct copy? A. Yes.

Mr. Mahoney: The photostatic copy of invoice M-56735, dated July 23, 1918, which the witness has testified to be a true copy of the original invoice produced by the witness, is hereby offered in evidence as Defendants' Exhibit 120, and the notary is requested to so mark the same.

Mr. Edgerton: The exhibit is objected to as secondary evidence.

Q. The invoice which you have produced is the record copy from the files of the Bucyrus-Erie Company, and is necessary to be kept in your files, is that correct, for record purposes? A. Yes.

Q. That copy, I presume, you would not be willing to surrender as an exhibit to this deposition which is going to be used out of the state, is that correct? A. I would be willing to surrender this invoice if given sufficient time to make a copy for my records.

Mr. Mahoney: The photostatic copy is withdrawn in view of the witness' answer. The original is therefore offered in evidence as Defendants' Exhibit 120 in lieu of the photostatic copy, and the notary is requested to so mark the same.

(Narrative continued.) The accounts receivable ledger sheet with the Chile Exploration Company shows that the company paid invoice M-56735 dated July 23, 1918. This ledger sheet bears the identifying number "index number 63 sheet No. 1" in addition to the words "Chile Exploration Company." Entry under date of September 4, 1918, on this ledger sheet shows the payment of $78,550.00, and also the fact that 9/4 is indicated immediately to the left of the entry for the invoice.

Q. Perhaps I should have asked you first which item on this ledger sheet refers in any way to the shipment covered by invoice M-56735 by which the Chile Exploration Company was charged with the amount of the invoice? A. The entries "July 23" appearing on the third line under "1918", the entry of invoice "No. M-56735", and "1-225B-#2145" and the amount of $78,550 entered in the debit column on the ledger sheet.

Q. Then the fourth entry, as you explained, under date of September 4, 1918, on this ledger sheet indicates that the amount of this invoice, $78,550.00 was paid on that date, is that correct? A. Yes.

(Narrative continued.) This ledger sheet is the original ledger sheet taken from the files of the Bucyrus-Erie Company over which I have supervision, and the entries on the ledger sheet were made in the regular course of business and contemporaneously with the transactions to which they refer. I would not be willing to surrender this original ledger sheet index 63 sheet 1 as an exhibit for this deposition because it is one of the permanent records of this company. The photostatic copy of the ledger sheet just handed me I have compared with the original sheet and find that it is a true and correct copy thereof.

Mr. Mahoney: The photostatic copy of Bucyrus Company ledger sheet index No. 63, sheet 1, of the contract account with the Chile Exploration Company is hereby offered in evidence as Defendants' Exhibit No. 121, and the notary is requested to so mark the same.

Mr. Edgerton: Objected to as irrelevant, immaterial and incompetent.

(Narrative continued.) I have an invoice No. 70561 dated October 11, 1919, that shows the invoicing of the Bucyrus Company order No. 96,139 to the Chile Exploration Company of New York of a dipper front No. 35575-A. As previously testified, the date of October 11, 1919, on the invoice is the date that the shipment was made. The serial number of the shovel for which this part was intended shows on the invoice as shovel No. 2145. The total amount of the invoice is $1400.00. This is a duplicate original invoice from the files of the Bucyrus-Erie Company over which I have supervision. I am willing to surrender this original record as an exhibit if given sufficient time to make a copy thereof.

Mr. Mahoney: The Bucyrus Company original invoice No. 70561, dated October 11, 1919, to the Chile Exploration Company, New York, New York, is hereby offered in evidence as Defendants' Exhibit 122, and the notary is requested to so mark the same.

Mr. Edgerton: The exhibit is objected to as immaterial, incompetent and irrelevant.

(Narrative continued.) I have original accounts receivable ledger sheet of the Bucyrus Company which shows payment of the account of invoice M-70561 by the Chile Exploration Company. This invoice was entered

as a debit and the payment of the invoice is recorded as a credit. This ledger sheet bears index number 63 sheet No. 7, and this invoice has been entered as of October 11, 1919, in the amount of $1400.00 and the payment therefor has been entered as of November 24, 1919, in the same amount. These entries were made in the regular course of business contemporaneously to the transactions to which they refer. I would not be willing to surrender this ledger sheet as an exhibit for this deposition. I have compared the photostatic copy of ledger sheet index No. 63, sheet 7 and find that it is a true and correct copy of the original.

Mr. Mahoney: A photostatic copy of both sides of Bucyrus Company ledger sheet, index number 63, sheet 7, which the witness has stated is a true and correct copy of the original from which he has been testifying, is hereby offered in evidence as Defendants' Exhibit 123, and the notary is requested to so mark the same.

Mr. Edgerton: The exhibit is objected to as incompetent, immaterial and irrelevant.

Cross Examination by Mr. Edgerton.

Referring to Defendant's Exhibit No. 120 I did not have anything to do directly with the preparation of this invoice. I do not recall whose initials those are shown in pencil in the left column near the bottom of the page. Referring to Defendant's Exhibit 121 I did not have anything to do directly with the preparation of this ledger page. Referring to Defendant's Exhibit 122 I did not have anything to do directly with the preparation of this invoice. The same is true as to Defendant's Exhibit 123. In 1918 and 1919 I was employed by the Bucyrus Company under the immediate supervision of the assistant controller, doing work of a miscellaneous accounting character in the accounting department. I did not have charge of the records Exhibits 120 to 123, inclusive, at that time, although I was and am familiar with them. The entry reading "orginal order 18641" on Defendant's Exhibit 118 means the original shop order number on which a dipper of the design shown on the drawing was manufactured by the Bucyrus Company. That number would not appear on the ledger sheets or invoices, Exhibits 120 to 123, inclusive. That number however would be carried through the shop and accounting records of

the Bucyrus Company. I do not have any knowledge or record independent of the ledger sheets Exhibits 121 and 123, which show the payment of the respective accounts to which I have referred by the Chile Exploration Company.

Deposition closed.

(Deposition session was adjourned at this time to 9:30 a. m., May 1, 1931.)

(Friday, May 1, 1931, 9:30 a. m., deposition session resumed.)

C. A. KELLY, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is C. A. Kelly. I reside at Milwaukee, Wis. I am fifty-one years of age. I am purchasing agent for the Bucyrus-Erie Company, and have been employed by this company or its predecessors for about twenty years. During the years 1917 or 1918 I was foreman of the drawing room. I am the C. A. Kelly whose name is signed on drawing No. 35576, Defendant's Exhibit 118. The date of my signature on that drawing is February 7, 1918. Before any drawing was issued to the shop it must bear the foreman's signature. I was not required to check the drawing. I merely had to approve the drawing by signing my name thereon. That is virtually what it amounted to. The designation on the drawing "1-2145" indicates the following. The "1" is a symbol designating a shovel. The "2145" is the serial number of the machine. This drawing is what is known as the general arrangement drawing and was made after the individual details were issued to the shop. I have a tracing to show instructions issued to the shop as the details of the dipper shown in this drawing. This is tracing G1-2145-A, known as the general list. This list specifies a 6-B dipper indicating that it is to be manufactured to a detailed list 71838 group 1, one set. With the teeth, both back braces, and the bail straps as shown on lines 1, 2 and 3. This tracing indicates drawing 35576 as the principal or general drawing. The serial number of the machine 1-2145, size 225-B appears on this tracing. The date of this tracing to which I have been referring is August 24, 1917. The detailed list called for this tracing G1-2145-A is tracing number 71838, which I hereby produce. This detailed

list covers the instructions to the shop to manufacture the detail parts going into the construction of a 6 yard dipper, symbol 6-B. This tracing bears two dates, having been checked on February 5, 1918, and approved by me as foreman on February 6, 1918. Both the blue print 35576 and the detailed list 71838 indicate it was for a 225-B machine, serial number 1-2145. After these tracings G1-2145 and L-71838 are received in the shop, the production department will issue instructions for the ordering of castings, forgings or other items produced in our shop. If the storekeeper does not have the store items he will see that they are so ordered. After the parts have been made up in accordance with the engineering department's drawing this department does not have anything further to do with them. All parts are presumably then inspected by the inspection department. As a matter of fact, I know it is the practice that all parts are inspected before they leave the shop.

After such an inspection the inspection department issues to the engineering department what is known as an inspection sheet indicating the serial number of purchased equipment, also indicating the manufacturer's name of certain purchased items together with pattern numbers if any. I have a copy of such an inspection sheet showing that the dipper in drawing 35576, Defendant's Exhibit 118, for shovel No. 2145 had been inspected by the shop. The number of this inspection sheet is No. 1-B-2145 and it is dated July 23, 1918. This inspection sheet indicates that we shipped with this machine a 6 yard dipper, 6-B. It also indicates the pattern number and the manufacturer's points and bases required for dipper teeth. These tracings G1-2145-A, and L-71838 and this inspection sheet 1-B-2145 dated July 23, 1918, are original records with our company and I would prefer not to have them go out of our possession. If necessary I can have made certified copies of these three prints. The initials "C.A.K." on the bottom of the sheet 1-B-2145 are my initials. The date 10-28-18 on this inspection sheet is the date on which it was compared with the general list to determine whether or not it agreed therewith insofar as this could be determined by the engineering department. In other words, after this list comes back from the shop, the engineering department checks it with the list of drawings. This checking must take place after the shipment has been made. I cannot state what the date "7-23-18" indicates on the top of the list. The rubber stamp appearing on this sheet 1-B-2145 indicates the

date on which this specific blue print was made. I have compared the blue prints of tracings L-71838 and G-1-2145-A and the photostatic copy of inspection sheet 1-B-2145 with the original tracings and inspection sheet and find them to be true and exact copies thereof.

Mr. Mahoney: Blue print G1-2145-A, dated August 24, 1917, blue print L-71838, dated February 5 and 6, 1918, and the photostatic copy of blue print 1-B-2145, dated July 23, 1918, are hereby offered in evidence, as a group, as Defendants' Exhibit 124, and the notary is requested to so mark the same.

Mr. Edgerton: The exhibit, blue print 1-B-2145 is objected to as secondary evidence; the entire exhibit is objected to as incompetent, immaterial, irrelevant and as insufficiently proven.

Mr. Mahoney: Direct examination closed.

CROSS EXAMINATION by Mr. Edgerton.

Q. In your answer to Q. 37, you stated the checking must take place after the shipment is made. You mean it is the practice of your company to permit goods to be shipped before you even undertake to check the material list with the inspection report? A. The answer to Q. 37 referred to the checking of the inspection sheet issued by the chief inspector with the original general list, and does not refer to the checking of the material.

Q. Then the material went forward, so far as the engineering department was concerned, without knowing whether the inspector's report would tally with the material specifications, is that right? A. It is not the function of the engineering department to supervise or assume responsibility for the inspection of material.

Q. You have not answered my question. A. Yes.

Mr. Edgerton: Cross examination closed.

RE-DIRECT EXAMINATION by Mr. Mahoney.

Q. The matter of inspecting materials called for by the drawings issued by the engineering department and in seeing that the materials called for by the drawings are shipped according to specifications, is a matter for the shop force, is that correct? A. It is.

Q. And the sheet 1-B-2145 indicates that the shop had checked such material in accordance with the drawings issued by the engineering department? A. It does.

Mr. Mahoney: Re-direct examination closed.

Deposition closed.

ANDREW VAHLDIECK, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Andrew Vahldieck. I reside at Milwaukee, Wisconsin. I am forty-seven years of age. I am general foreman of the machine shops of the Bucyrus-Erie Company. I have been employed by the Bucyrus-Erie Company twenty-four years or a little over that. I am testifying under subpoenas. In the years 1917 and 1918 I was foreman of the engine shop until the first part of 1918 when I was made chief inspector. I was foreman over the inspectors. This department inspected all of the work that went through the shop. The work is inspected as each piece is made, and then a final inspection after it is assembled. All errors or discrepancies were taken up with the engineering department before the shipment was sent out. That is my signature indicated by the writing at the bottom of blue print 1-B-2145 dated July 23, 1918. This paper is a copy of the inspection sheet. This inspection sheet is for a repair sales record of the parts that went into this particular job and indicates the parts that were actually shipped on order 10892 for machine serial number 2145. The date 7-23-18 indicates the date the inspection was made out, and the material would have been shipped previous to that date. At the time this inspection sheet was made out I was chief inspector and as chief inspector I was responsible for seeing that the material called for by the engineering department drawings and lists conformed to the specifications called for by the engineering department list. The reference 6-B with the pencil ring around it on inspection sheet 1-B-2145 indicates the symbol number of the dipper. This symbol number 6-B appears on tracing G1-2145-A. The principal number for this dipper 6-B appearing on this inspection sheet is 35576. The serial number of the machine shown on inspection sheet 1-B-2145 is serial number 2145. Shop No. 225-B. The number S-291 is the shop inspection number.

No cross examination.

Deposition closed.

NOEL S. HAYWARD, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Noel S. Hayward. I reside at 1250 Fairview Avenue, South Milwaukee, Wisconsin. I am fifty years of age. I am chief interpreter, repair sales division, in charge of all records of the Bucyrus-Erie Company. By the term chief interpreter is meant that when a repair order comes and there is any question about the proper interpretation, I am supposed to decide on the correct interpretation. This term does not refer to translation of foreign languages. I have been employed by the Bucyrus-Erie Company or its predecessors since October, 1916. The Bucyrus-Erie Company has received repair orders for a machine sold to the Chile Exploration Company serial number 2145, 225-B shovel since July 23, 1918. I hereby produce the original repair order for the Chile Exploration Company 225-B, machine 2145. The date of this order is September 13, 1919. The number of this order is 8053-96139. This repair order was issued for one dipper front. The repair order shows that the part it covered was pattern number 35575-A on drawing 35575. The numbers on this repair order appear on drawing 35576, Defendant's Exhibit 118. This is an original record taken from the files of the Bucyrus-Erie Company over which I have supervision.

The stamp at the bottom on the left hand side indicates that the casting on this order was ordered from the foundry on September 13, 1919; and the stamp on the right hand corner indicates that the casting was routed through the shop on the date stamped thereon. The date of shipment given on this order is the date of contemplated shipment of the part. This repair order No. 96139 is one of the permanent records of the company and I would not be willing to surrender it as an exhibit. The photostatic copy of this repair order 8053-96139 is a true and exact copy of the original.

Mr. Mahoney: The photostatic copy of repair order 8053-96139 of the Bucyrus-Erie Company, dated September 13, 1919, for dipper front for 225-B shovel, Serial No. 2145, for the Chile Exploration Company, is hereby offered in evidence as Defendants' Exhibit 125, and the notary is requested to so mark the same.

Mr. Edgerton: Objected to as incompetent, immaterial and irrelevant.

Q. Is the dipper front subjected to considerable wear?

Mr. Edgerton: This witness has not been qualified to answer such a question. The question is therefore objected to as incompetent, and as leading.

A. Yes.

Q. You have had considerable experience with repair orders, have you not, with the Bucyrus-Erie Company? A. Yes.

Q. What are dipper fronts sometimes referred to? A. As wearing parts.

Q. I presume they have to be renewed at certain intervals depending upon the amount of use they are subjected to?

Mr. Edgerton: Objected to as leading.

A. Our records indicate that this is so.

Mr. Mahoney: Direct Examination closed.

CROSS EXAMINATION by Mr. Edgerton.

Q. Do your duties with the Bucyrus-Erie Company or its predecessor familiarize you with transportation problems such as the length of time an article as described in Exhibit 125 would be received in Antofagasta, Chile? A. No.

Q. Referring to the Exhibit 125, and particularly to the line marked "Shipped to Chile Exploration Company," does this mean that the product was to be shipped to the address indicated herein and that it was sold to the Chile Exploration Company, at Antofagasta? A. The instructions received with this order denote that it is to be shipped to the Chile Exploration Company at Antofagasta, Chile, and it is to be presumed that it was so shipped.

Q. Do you know of your own knowledge whether it was in fact ordered by the Chile Exploration Company of Chile and shipped to them at Antofagasta, Chile? A. No.

Q. What, if anything, did you have to do with the preparation of this original document, of which Exhibit 125 is a copy? A. Nothing.

Q. When did you first see this paper? A. As near as I can prove, the first time I saw this document was in September, 1922.

Mr. Edgerton: Cross examination closed.

RE-DIRECT EXAMINATION by Mr. Mahoney.

Q. This record was found by you in the files over which you have supervision as early as September 28, 1922, is that correct?

Mr. Edgerton: Objected to as leading.

A. Yes.

Q. And had been in the files previous to the time you first referred to, is that correct?

Mr. Edgerton: The same objection.

A. Yes.

Mr. Mahoney: Re-direct examination closed.

Deposition closed.

(At this point a recess was taken in the deposition session until 1:00 P. M. of the same day, Friday, May 1, 1931.)

(1:00 P. M., Friday, May 1, 1931, deposition session resumed.)

D. P. EELLS, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is D. P. Eells. I reside at 1653 North Prospect Avenue, Milwaukee, Wisconsin. I am forty-six years of age. I am vice president of the Bucyrus-Erie Company in charge of the foreign department. I have been employed by this company or its predecessors since 1907. I am testifying under subpoenas in these cases. During the years 1917 and 1918, I was treasurer of the company and also manager of the foreign department. I have a very distinct recollection that while I was manager of the foreign department our company sold stripping shovels to the Chile Exploration Company, because I participated in the negotiations personally. This was a 225-B electric shovel, equipped with a front opening dipper. I hereby produce the original order our company received for the 225-B electric shovel from the Chile Exploration Company. This order number is dated June 21, 1917, and numbered 10583, requisition CX10329. This order was received from the Chile Exploration Company at 120 Broadway, New York. The order is signed Chile Exploration Company G. G. Thomson, purchasing agent and is addressed from New York City, 120 Broadway. That is where the general offices of this

Company was located at this time. Today their offices are on lower Broadway, I don't remember the exact number; I think in the Cunard Building in the offices adjacent to the Anaconda Copper Company, of which the Chile Exploration Company now is a subsidiary corporation.

The specifications attached to and forming a part of the order read as follows as to the dipper:

"The dipper is of extra heavy design suitable for digging hard material. All parts are designed to withstand not only the sudden shocks to which they are subjected but also the continual wear. All pins are of ample size and the pin holes are fitted with renewable hardened steel bushings.

"The dipper is of our special front opening type, capable of loading cars at the pit elevation. The front will be a nickel chrome steel casting hinged to the sides close to the top. The back will be an annealed steel casting with lugs for the attachment of the handle end castings and the back braces."

Q. Referring to this file, I call your attention to the letter from the Chile Exploration Company of September 22, 1917, to the Bucyrus Company, and ask you to state what this letter refers to, particularly the third paragraph of the letter. A. The letter refers to the order, and particularly in the third paragraph to the front opening dipper, and requested that we send them a drawing of this front opening dipper when completed.

Q. Do you know whether this order was accepted by your company? A. Yes. It was.

Q. I now hand you a blue print which has been introduced in evidence here as Defendants' Exhibit 118, and ask you to state what this blue print shows?

Mr. Edgerton: Objected to as leading.

A. This shows the front opening dipper as supplied to the Chile Exploration Company for the 225-B shovel ordered June 21, 1917.

Mr. Edgerton: Objection.

Q. Do you know whether or not the Bucyrus Company made up a dipper like that shown in drawing 35576, Defendants' Exhibit 118? A. Yes.

Q. Did you actually see the dipper after it was manufactured by your company before shipment? A. I did.

Q. Where did you see this dipper? A. In the shop at South Milwaukee, on the erecting floor.

Q. I now hand you photographs 3049-A, B, C and D, Defendants' Exhibit 119, and ask you to state what they illustrate, if you know?

Mr. Edgerton: Objected to as leading.

A. These show the dipper as furnished the Chile Exploration Company in accordance with drawing 35576.

Q. Do you know whether this dipper was actually shipped to the Chile Exploration Company in accordance with order No. 10583 in connection with this 225-B shovel? A. Yes, I know that it was shipped to the Chile Exploration as part of their order for the 225-B electric shovel.

Q. Have you got any papers to indicate that the shovel was accepted by the Chile Exploration Company after it was shipped to them? A. Yes. Their letter of April 9, 1919, indicates that our erector has completed his work at the property and was released. His work consisted in erecting, testing and demonstrating, breaking in operators, and so forth, for the Chile Exploration Company in connection with the 225-B electric shovel and other shovels which we likewise supplied this company.

Q. Does the letter give the name of your erector? A. Yes. The name of the erector is O. W. Momsen.

Q. Do you know if Mr. Momsen is still in your employ, and, if so, where is he located? A. Mr. Momsen is still in our employ, and has been working for us for a number of months erecting and testing some machines which were sold to the Foundation Company in Greece.

(Narrative continued.) At the present time Mr. Momsen is on leave in Paris, France, but will return to Greece again in a few weeks time, as the Foundation Company wish to have him act as their superintendent. The paper Defendant's Exhibit 120 is a copy of the invoice rendered to the Chile Exploration Company for the 225-B electric shovel called for on their order number 10583, their requisition number CX10329. The total amount of this invoice is $78,550.00. The date of the invoice is July 23, 1918, and indicates the date of the shipment of the shovel from our works. The Chile Exploration Company paid this invoice in accordance with the terms of payment. We would be opposed to surrender the original order number 10583 and the letter of the Chile Exploration Company to the Bucyrus Com-

pany dated April 9, 1919 and the letter of the Chile Exploration Company dated September 22, 1917, and page 6 of the specification number 1977 forming part of this order. I have compared the photostatic copies handed me of the various papers above referred to with the originals and find they are true and correct copies of the original.

Mr. Mahoney: The photostatic copies just compared by the witness with the originals are hereby offered in evidence as a group, as Defendants' Exhibit 126, and the notary is requested to so mark the same, Chile Exploration Company order No. 10583, requisition No. CX10329, dated June 21, 1917, for one 225-B electric shovel, letter of September 22, 1917, from Chile Exploration Company to Bucyrus Company, letter of April 9, 1919, from the Chile Exploration, Chiquicamata, Chile, to the Bucyrus Company, and page 6 of specification No. 1977, referred to as forming a part of this order.

Mr. Edgerton: The exhibit 126, and each of the papers thereof, are objected to as secondary evidence, and particularly is this objection urged because the offer does not include certain papers and letters in the file from which the witness has testified; moreover, it is apparent that the original file contains papers which have been defaced and these defaced papers have been urged in the witness' testimony; further, the file contains letters which have been signed by persons not called to testify.

I would like to accommodate counsel and the Bucyrus Company, but under the circumstances insist that the original papers be offered in evidence.

Mr. Mahoney: Counsel for plaintiff is requested to indicate which of the papers referred to in the witness' testimony that have been defaced.

Mr. Edgerton: Page 6 of specification No. 1977.

Q. Please refer to page 6 of the specification which counsel for plaintiff says has been defaced, and explain such alleged defacture. A. At the time this order was taken we had a dipper of another type which was furnished for machines of this size to other customers, and specifications were printed to include the other type of dipper. It was our practice then, and is still our practice, to attach a rider calling for a dipper or other part of different design to the specification. This was the

practice rather than going to the trouble of printing or typewriting an entirely new specification.

Q. This rider, then, to which counsel for plaintiff has objected on page six specification No. 1977 formed a part of the original specification submitted to the Chile Exploration Company, and when the order was entered, is that correct?

Mr. Edgerton: Objected to as leading. Let the witness testify.

A. Yes. This statement is correct.

Q. Were the original letters from which photostatic copies were made for this Exhibit No. 126 dated April 9, 1919, and September 22, 1917, original letters received by your company in regular course through the mail? A. Yes. The letter dated April 9, 1919, was received by us direct from the Chile Exploration Company's plant at Chuquicamata, Chile, and the other letter, dated September 22, 1917, was received by our New York office and forwarded to us from there.

Mr. Mahoney: A recess will be taken at this time in order to show a moving picture of the Bucyrus shovel No. 225-B with the front dumping dipper thereon in operation at the Chile Exploration Company's mine in Chile, South America.

After recess.

Q. Mr. Eells, we have just witnessed a showing of the moving picture. Will you kindly explain what the moving picture shows, that we saw? A. The moving picture shows a portion of the mine of the Chile Exploration Company at Chuquicamata, Chile, in which various Bucyrus shovels are in operation, and of particular interest is the portion of the film which shows the 225-B electric shovel equipped with the front opening dipper, loading copper ore into cars.

Q. The 225-B shovel with the front opening dipper thereon was shown in actual operation in the film, is that correct?

Mr. Edgerton: Objected to as leading.

A. Yes; that statement is correct.

Q. Will you describe how the front opening dipper operated in the moving picture which you have just witnessed? A. Instead of the material being released from the dipper by the opening of the door, such as occurs on dippers generally furnished for use on steam shovels and

electric shovels built in those days, this front opening dipper as shown in the moving picture film operated in a somewhat different manner; that is to say, the dipper is built in two parts and the dipper front is pin-connected at the top and so arranged that this is a hinge connection which can be opened at will and allow the material to fall out into the car.

Mr. Edgerton: The foregoing answer is objected to; the witness in his description had before him Exhibit 119 which he studied and based his answer thereupon.

Q. Did the moving picture which you have just witnessed show the front opening dipper operating in the manner which you have described in your previous answer? A. Yes, it did.

Q. Please state how this film from which this picture that was just shown came into your company's possession? A. It was purchased by the Bucyrus Company from the party who took the film of the entire mine in operation of the Chile Exploration Company. The correspondence with these people was carried on by the foreign department of the company, and at first it was the desire to sell to us the entire film but we indicated that on account of the expense of purchasing the entire film we desired only that portion which showed the shovels, which we had furnished, in operation. Consequently, after some correspondence back and forth the owners of the film agreed to give us only the portion which we desired, and a portion of the film was purchased rather than the entire film.

Q. Did you handle the matter of the purchase of this film for your company personally? A. It was handled by our department under my supervision, and the decision rested in my hands.

Q. Do you recall when this film was purchased? A. A comparatively short time after the 225-B electric shovel, equipped with the front opening dipper, was put in operation.

Q. Has this film been in the company's possession all of these years, do you know?

Mr. Edgerton: Objected to as vague and ambiguous.

A. Yes, it has.

Q. Did you see the film exhibited shortly after it was purchased by your company? A. I did, immediately after it was received by us.

Q. Is the film which you have witnessed today the same identical film that you saw exhibited shortly after it was purchased by your company? A. Yes, it is.

Q. In the showing of this film, how were you able to identify the shovel shown therein as being the Bucyrus Company shovel with the front dumping dipper thereon which you have stated was sold to the Chile Exploration Company on order No. 10583 now in evidence? A. There is no question but what the shovel is a Bucyrus shovel, because the letters "Bucyrus" can plainly be seen on the side of the boom. Since we only furnished one 225-B electric shovel dipper for the Chile Exploration Company, it follows that the shovel shown in the film is the shovel covered by their order of June 21, 1917.

Mr. Edgerton: Objected to as conclusions.

Q. Was the showing of the film of such a nature that you could positively identify the design of your company's shovel and particularly the front opening dipper? A. Yes.

Q. Have you got the correspondence which shows the negotiations you carried on in connection with the purchase of this film? A. No. That correspondence has been destroyed.

Q. Do you know when the correspondence was destroyed? A. Comparatively recently, when we cleaned out some old foreign department files.

Q. Do you know if this correspondence was destroyed before any question came up about the use of this film as an exhibit in this case? A. Yes. The exact date can be furnished by the members of our department who supervised the destruction of these files.

Q. Do you know if a search was made to locate any records in connection with the purchase of this film within the last few days or the last week or so? A. Yes, a short time ago a careful search of the files was made with a view of producing this correspondence, but it could not be found as all correspondence of this nature that occurred in those years was destroyed.

Mr. Mahoney: The film which was exhibited during the recess period showing the 225-B Bucyrus electric shovel with the front dumping dipper thereon in operation in the mine of the Chile Exploration Company at Chuquicamata, Chile, South America, is hereby offered in evidence as Defendants' Exhibit 127, and the notary is requested to mark the same.

Mr. Edgerton: The exhibit is objected to as immaterial, incompetent and irrelevant, and as insufficiently proven.

Mr. Mahoney: Direct examination closed.

CROSS EXAMINATION by Mr. Edgerton.

I was not present when that picture, Defendant's Exhibit 127 was taken.

Q. Is the Bucyrus-Erie Company interested in the outcome of the litigation between the Keystone Driller Company and the two defendants herein?

Mr. Mahoney: Objected to on the ground that this witness is not connected with the legal department of the Bucyrus-Erie Company nor versed in patent matters, and therefore this question is obviously improper and is attempting to obtain information about which the witness is not competent to testify.

Mr. Edgerton: This witness has been shown in direct examination to be an officer of the company, and it will also be noted that Mr. Arnaud of the patent department of the Bucyrus-Erie Company has been present throughout the taking of these depositions.

Mr. Mahoney: Mr. Arnaud has been present at these sessions merely as a spectator.

A. The Bucyrus-Erie Company is naturally interested in any litigation that is taking place in the industry between companies that are engaged in the manufacture of excavating machinery.

Mr. Edgerton: Cross-examination closed.

Deposition closed.

CARLYLE BRINKMAN, a witness, called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

Mr. Mahoney: It is hereby stipulated that notice as to this witness is hereby waived.

My name is Carlyle Brinkman. I reside at Milwaukee, Wisconsin. I am 45 years of age. I am sales engineer of the Bucyrus-Erie Company. I have been connected with them for about eight years. I have been at the mines of the Chile Exploration Company at Chuquicamata, Chile. The last time I was there was in January, 1931. My duties with the Bucyrus-Erie Company re-

lates to the promotion of sales in Chile, mostly connected with iron and copper mines and nitrate mines. The various types of shovels of the Bucyrus-Erie Company that are used by the Chile Exploration Company in their Chile mines are 120-B heavy duty electric shovel, 320-B electric shovel, 225-B electric shovel, 30-B Diesel shovel, 103-C and 95 ton railroad type. I have seen two 225-B electric shovels on this mining property. The 225-B electric shovels were not working during the last part of 1930, but one of them, which I saw in 1928 or the first part of 1929 had what we call a front opening dipper. The other 225-B was, as I recall it, equipped with a standard type Messabi dipper. I have seen the 225-B electric shovel with the front opening dipper operating at the mines of the Chile Exploration Company at Chuquicamata, Chile. I saw this shovel in operation many times. I remember seeing it in operation in 1921, 1929, and 1930. While I have only been with the company for eight years I have seen this shovel in operation many other times before I went with the Bucyrus company.

Mr. Mahoney: A recess was taken and the moving picture, Defendants' Exhibit 127, was exhibited to the witness and counsel.

Q. You have just witnessed the motion picture. Can you state whether or not it shows the properties of the Chile Exploration Company at Chuquicamata, Chile? A. I can state that it does, positively.

Q. Will you state what the picture showed and the type of equipment you saw in operation in this picture, in a brief way? A. The picture showed several railroad type shovels, and one of the 225-B.

Q. What type of dipper was the 225-B equipped with? A. The 225-B was equipped with a front opening type of dipper.

Q. Could you definitely identify this as the Bucyrus Company 225-B electric shovel with front opening dipper which you saw in operation at the various times you were on this property of the Chile Exploration Company at Chuquicamata, Chile? A. I can identify it positively because there is no other shovel of that size built of similar construction.

Mr. Edgerton: Objected to as an opinion.

Q. Would you say positively that this was the shovel which you saw in operation to the best of your knowledge and belief? A. I can say positively that the

picture was taken at Chuquicamata, Chile, and that the shovel in the picture is a 225-B Bucyrus with front opening dipper.

Q. And you saw such a shovel in operation at the various times you visited these properties, is that correct? A. At least on the majority of times that I visited the property I saw the shovel in operation.

CROSS EXAMINATION by Mr. Edgerton.

Q. Were you present when the picture which you witnessed this afternoon was made at Chuquicamata, Chile? A. I was not.

Cross-Examination closed.

Deposition closed.

J. H. IMSE, a witness, called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is J. H. Imse. I reside at 1839 N. 54th St., Milwaukee, Wisconsin. I am 34 years of age. At present time I am correspondent in the foreign and export department, the Bucyrus-Erie Company. I have been employed by the Bucyrus-Erie Company about sixteen years. Defendants' Exhibit 125 is a repair order No. 96,139, dated September 13, 1919. This order covers one dipper front and was received from the Chile Exploration Company. The order was received for machine No. 2145 a 225-B shovel. I interpreted this order. By interpreting the order I mean that when an order is received the engineering records are referred to to determine the proper material to be supplied. Furthermore, the previous repair records are also consulted to be sure that the same material is being furnished. I wrote up this order myself. The order was written on the date appearing thereon.

No cross-examination.

Deposition closed.

H. O. JACOBSEN, a witness, called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is H. O. Jacobsen. I am 43 years of age, and reside at 1245 Fairview Avenue, South Milwaukee, Wisconsin. I am engineer for the Bucyrus-Erie Company. I have been employed by the Bucyrus-Erie Company or its predecessors. I now hold the position of executive engineer. In 1915 and in 1918 I was draughtsman with the company and in 1918 I was doing checking of drawing work. Referring to Bucyrus Company drawing No. L-881 I remember I worked on this drawing under the supervision of Mr. Lehman. That was shortly after I came here, and Mr. Lehman furnished me with three hand sketches from which this drawing was made. I am certain a dipper was made in accordance with that drawing, because my recollection is that I had to make changes on the drawing during the test of the dipper. These changes were always brought in by Mr. Lehman. I have no recollection of being present at the test. I have however, a recollection of seeing a dipper on the 14-B shovel during the noon-hour.

The group of photographs just handed me, Defendants' Exhibit 117, undoubtedly show the dipper that I saw on the 14-B shovel. Referring to Defendants' Exhibit 118 I signed the tracing of this drawing on February 6, 1918, after having checked the same. By checking the drawing is meant all drawings first come from a lay out, then are detailed and in a majority of cases traced and finally checked and then approved by the engineers in charge before the work is done in the pattern shop or in production. The detailed drawings are handed over to a man in the engineering department, in conjunction with the lay out, who checks through the various functions for which a unit has been designed, and also checks to see that all dimensions on the detailed drawing and general drawing are correct. He also checks to see that the unit will function properly with other units on the machine. I know that a dipper was built like that shown in drawing 35,576, Defendants' Exhibit 118 for a 225-B revolving shovel, furnished the Chile Exploration Company. I have a recollection of seeing this dipper on the assembly floor before the same was shipped. Referring to the group of four photographs, Defendants' Exhibit 119, these photographs illustrate four different views

of the six yard front dumping dipper furnished the Chile Exploration Company. It may be seen that on one photograph, 3049-A, the pattern number is cast integral with the front. This pattern number 35,575-A is the pattern number of the dipper front used on the Chile Exploration Company order. The parts that have been marked with the letter "A" on photograph 3049-A are the corner dipper teeth. As to operation, this dipper was designed for a purpose of providing a means for emptying the dipper readily when dumping low. For this purpose it did not use the conventional bottom door of dipper design which would obstruct the material when dumping low, but used a hinged front by which means the front swung open when unlatched when dumping low providing a much better means of emptying the dipper in this position. As to closing when the dipper swings back into the pit the front naturally has a pendulum action and swings back, and when swung back it engages behind a latch which is provided for the purpose of holding the front latch. The term front applied to an outward stroke shovel on any dipper, including the front opening dipper, is that part of the dipper which provides a cutting edge when passing through the bank. In the case of drawing 35,576, Defendants' Exhibit 118, the front is denoted by a piece marked "2," placed in a circle with an arrow pointing from this piece marked to the drawing of the front.

I was present this afternoon when the moving picture, Defendants' Exhibit 127, was exhibited. I saw this picture before. It was exhibited after the Chile Exploration Company's shovel was in operation in the copper mines of Chile. It must have been approximately during the year 1919 that I saw the picture first exhibited. I distinctly remember that the foreman and engineers and some of the draughtsmen who had worked on the Chile Exploration Company's shovel were invited to see a reel of moving pictures of a shovel which were exhibited in the basement of the main office building of the Bucyrus-Erie plant at South Milwaukee. I distinctly remember the picture, as it was the first moving picture that I saw exhibited at the plant, and we were interested in the Chile Exploration Company since we had shipped quite a few shovels down there. This moving picture shows two machines, outside of the locomotive are the railroad type shovel and the large revolving shovel. It is not quite easy to distinguish whether the railroad type

shovel is of Bucyrus manufacture or not, but it is very easy to distinguish the full revolving type shovel since there were only two firms making this size of shovel. The Bucyrus shovel is easily distinguished by the fact that we use what are commonly called outside dipper sticks, that is, that the two dipper sticks straddle the boom. In the case of our competitor the dipper stick is a single member which passes through the center of the boom and is really straddled by the boom. The front opening dipper is easily seen on this moving picture and may be readily identified by comparing the same with the photographs taken on the erecting floor and also with the general drawing, Defendants' Exhibit 118.

Q. In other words, the moving picture shows the Bucyrus 225-B shovel with the front opening dipper which you stated you checked the drawings on and saw the dipper on the shop floor at South Milwaukee, is that correct? A. It does.

Cross Examination by Mr. Edgerton.

Q. Referring to Exhibit 118, did you print your name on the tracing from which this blue print was made? A. Yes, sir, I did.

Q. Now refer to Exhibit 116. Is your name in your own printing in that drawing? A. Yes, sir, it is.

Q. Did Mr. Walter Ferris supervise the making of either one of these drawings? A. I believe that Mr. Ferris was connected with the original structural front dumping dipper, but of that I am not sure since I worked directly with Mr. Lehman. Mr. Ferris was chief engineer at that time, but the ordinary draughtsman did not have much contact with the chief engineer and Mr. Lehman may have been and probably was in consultation with both Mr. Ferris and Mr. Bager on this dipper.

Q. You say may have been and probably was, but you are not sure of your personal knowledge, are you? A. No, I am not.

Deposition closed.

(Certificate of Notary omitted)

Mr. Mahoney: Now, Your Honor, we have made arrangements with a man to come here to show this picture to Your Honor here in the court room at two o'clock, if that arrangement is satisfactory. It will not take more than a few minutes.

The Court: Is that satisfactory to you, Mr. Richey?

Mr. Richey: If Your Honor wants to see it. It seems to me it is very objectionable, however. Manifestly, we haven't had any opportunity to cross examine any one about the machine that operated it when the picture was taken.

Mr. Corbett: Neither have we of yours.

Mr. Richey: Oh, yes; you saw the picture and you saw the man.

The Court: Well, I think we will have to take that picture here. Your objection goes to the weight of it. The court will bear that in mind when he sees the picture.

Mr. Mahoney: That is all of the depositions, Your Honor, and we are offering in evidence the depositions of all these witnesses whose evidence we have read from.

The Court: I want to get something clear in my mind. You have this Chile Exploration machine out of these depositions, and besides that an experimental machine that was put up in accordance with this patent here; is that right?

Mr. Mahoney: Yes. They had an inquiry for that type of dipper.

The Court: Let's see that patent. Was that a machine that was put up?

Mr. Corbett: The first machine built in accordance with that patent was a half yard shovel.

Mr. Mahoney: Two-thirds yard shovel.

The Court: Well, I am trying to get the patent and see where the patent was.

Mr. Mahoney: First of all they conceived the idea of that and filed that application patent, and then they made a wooden model of that thing first and tried it out, and it worked all right, and then they made an experimental steel model, as shown in the first group of photographs.

The Court: Which you will show this afternoon?

Mr. Mahoney: No, that is shown in the photographs here, and that was tested out in South Milwaukee, and was proved satisfactory, according to the testimony, and it was found that that type of shovel was satisfactory for use on big revolving shovels. Well, after they had proven that by this experimental steel model shown in these photographs, they had no further use for the experi-

mental steel, which was only a temporary arrangement, made out of steel for the purpose of testing. Later when they got an inquiry for that type of shovel, which is Defendant's 14-B experimental shovel, which had convinced them that that type of dipper was practical, then from that they just went ahead and manufactured the large 6 cubic yard dipper for the Chile Exploration Company, and shipped it to Chile.

The Court: It is all connected with this patent?

Mr. Mahoney: Yes.

Mr. Corbett: In the manufacture of the device that went to Chile, the scoop structure was different. But the patent structure shows the bucket or scoop opening higher up, but the device which was sold in this country and went to Chile shows the bucket or scoop opening practically at the bottom. That is one difference of some importance there. It was a different scoop, although it was the result of that whole development.

The Court: Well, this patent, then, is just an incident in that whole development. Is that the way you see it?

Mr. Corbett: Yes, Your Honor.

Mr. Richey: Does that close your case?

Mr. Mahoney: That is all the depositions—with the exception that we are going to show this moving picture this afternoon, and then introduce the same in evidence. The depositions of William M. Bager, Werner Lehman, N. A. McGrath, C. A. Kelly, Andrew Vahldieck, Noel S. Hayward, D. P. Eells, Carlyle Brinkman, J. H. Imse, H. O. Jacobsen, are hereby offered in evidence together with Defendants' Exhibits 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, and 126, which were offered in evidence during the taking of said depositions.

Mr. Richey: Now, you have enumerated all that you are going to put in?

Mr. Mahoney: Well, your witness is on the stand.

Mr. Richey: I was wondering whether you wanted to put an expert on in connection with this. Are you done now?

Mr. Mahoney: Not entirely, but we are done with that particular part of the taking of depositions if that is what you mean.

Mr. Richey: Well, we wanted to put Mr. Downie on after you concluded your case.

Mr. Corbett: Well, we have concluded our case.

Mr. Richey: All right, then.

Rex R. Downie, being re-called by the plaintiff testified as follows:

Direct Examination by Mr. Richey.

To refresh Your Honor's recollection, I would say that there was a question on the record at the time of the interruption. It related to what is known as the Thew device, which is in connection with the third Downie patent, which related to this connecting means between the stick and the scoop—what we called getting the hunky fool-proof device.

The Court: That is the third Downie?

Mr. Richey: Yes; it relates to the third Downie patent, and the particular exhibits under discussion were 56, 57, 59 and 60. Now, Your Honor, just to refresh your recollection this was the arc of the discussion in connection with that third Downie patent when we were interrupted. The question was: "Discussing the third Downie patent, I neglected to ask you to look at the Thew device shown in Defendant's Exhibits 56, 57, 59 and 60. Will you compare that in structure, mode of operation and results with the construction of the third Downie patent? You can also use this chart No. 43." That was the big drawing that the other side had.

The Court: Is that around here?

The Witness: Speaking mainly from Exhibit 59 as representing the type of joint between the stick and the scoop as illustrated in all of the exhibits referred to, there is a base plate at the foot of the stick fastened by means of a transverse pin at the forward edge of the scoop, and by other bolts extending in a direction parallel with the length of the stick, fastening the rear edge of that base plate with the top wall of the scoop, so that stresses in the scoop vertical or longitudinal of the stick would be transmitted to the stick, in part, by that forward pin which is in shear end in part by the shouldering action at the rear edge of the base plate. The pin which is in shear I am marking "A" on Exhibit 59, and upon the chart 43. The bolts in tension I am marking "B" upon chart 43 and Exhibit 59. The pin "A" in shear does not prevent play developing between the stick and the scoop of an essentially different type from that employed in the third Downie patent.

As to results in operation, since some initial clearance must be allowed for the insertion of the pin "A" and since the stress transmitted between stick and scoop in both directions would cause reversing shear stress and vibration upon the pin, the holes would necessarily become enlarged. It was to escape precisely such enlargement, due to operation and due to weather or rusting, for these scoops are in the open weather for periods of years, that the mounting of the third Downie patent was evolved, and which that mounting rectified in the commercial dipper. That completes my answer.

Q. Will you look at Defendant's Exhibits 43 to 49 showing the scoop said to have been used by the Brown Hoist Company, and compare that in structure, mode of operation and results with the disclosures of the fourth Downie patent. If you have had any personal experience with this type of tooth, you might state briefly what that is, and the results of it. A. These Exhibits represent two general types, or somewhat distinguishable types of side rake teeth or side teeth for the skimmer scoop, the one as shown in Exhibit 45-A, and the other in Exhibit 49-A. 45-A shows a trimmer or a side cutting blade vertically disposed, and with little or no blade for horizontal division of the material, whereas 49-A shows a distinct vertical blade, and corner attached therewith, to a horizontal blade. This tooth as shown in the depositions was made and offered in 1922, I think it was, by the Brown Hoist Company, and is patterned after a tooth which we developed in the skimmer in 1919, and of which I have certain photographs.

Q. Well, never mind the photographs—you can just say what it was and what your experience with it was? A. The tooth which we developed following was more like—I should have said preceding instead of following—the tooth 49-A, except that in our case we divided the vertical from the horizontal blades of the teeth. As stated, we used this as the side cutting tooth of the skimmer for a few months. The tooth was highly objectionable, and we abandoned use of it early in 1921. The objection was of two kinds: First, that the vertical shearing edge prevented a drawing out from being applied over road macadam or such work; in other words, it choked or blocked the entry of the scoop. That was the digging reason. There was also a reason in connection with the closing of the scoop in that the teeth protruded beyond the side plane of the scoop, the effort having been made to

get side clearance by this attachment of the tooth on the bottom, and interfered upon the side wall of the scoop so that we either had to cut back the side wall to a prohibitive degree—prohibitive, because it would be excessively weakening the side wall—or keep the teeth inside of the side wall. We chose the latter course, even though the skimmer does not require as much swing freedom for the dumping as do the scoops here in question.

(Noon adjournment)

Q. Mr. Downie, you said you had a photograph of that machine used with the tooth which you said you tried out and found to be a failure. Will you produce that photograph? A. I now produce a photograph of the skimmer, showing the side tooth to which I have referred made by us in 1919 and '20. This photograph is of the same machine and at the same site as the views shown on page 25 of Keystone catalog P-18, which is the machine of H. V. Kirker, contractor, of Beaver Falls.

Mr. Richey: I will offer that in evidence as Plaintiff's Exhibit P-69.

The Court: All right; it may be admitted.

Q. Now, were you present on March 11, 1931, when the defendant demonstrated its Osgood machine, that is, the defendant the Osgood Company demonstrated its Osgood machine before the court and the parties? A. I was.

Q. Will you describe briefly what was done with that machine at that time? A. The machine operated by Mr. Green March 11 was used to demonstrate discharge to inversion, the opening of the bottom for stop discharge, momentum closure of the bottom after stop discharge, the beginning and continuation of trench excavation, a very moderate gravity blow was struck on at least one occasion by the scoop, through a drop of about one foot, the stick was leaned toward the one side as for undercutting a trench for several degrees and sufficiently to efficiently undercut, the operation of rooting was demonstrated by passing the scoop over the ground first closed and then open, the boom and scoop were raised to the high elevation and the functioning of the stops was illustrated in the evident deflection of the bridle. I think that completes the principal functions of operation.

Q. Did you ask Mr. Corbett, of counsel for the defendant, the Osgood Company, if Mr. Elmire, our oper-

ator, could operate the machine there before the court? A. Yes, sir, I requested Mr. Corbett, and repeated it, upon denial, that Mr. Elmire be allowed to operate and more efficiently show the machine's capability of striking a gravity blow, rooting, the functioning of the stops, etc. Mr. Corbett refused the request, and repeated the refusal upon representation.

Q. Was a moving picture of that demonstration taken under your direction? A. Yes, sir.

Q. Have you that picture here? A. That picture is here.

Q. It also contains towards the end a short demonstration of the plaintiff's machine that was out there, doesn't it? A. That is correct; demonstration of the Keystone.

Q. Now, I will ask you to have that picture run and to point out these various operations as the picture proceeds.

Now, if Your Honor please, I understand the other side will put on their moving picture, and when they have put that on, we will put ours on, and the answer to this question.

The Court: All right.

Mr. Mahoney: Your Honor, we want to show our picture of the 225-B electric shovel that was shown as operated at the Chile Exploration Company mines, Chuquicamata, Chile, South America, at this point.

The Court: All right.

(Operator of machine being delayed in showing picture by difficulties in getting started.)

Mr. Corbett: You better put your picture on first.

Mr. Richey: All right.

(Moving picture of Osgood machine demonstration referred to in previous question shown on screen.)

Q. That is the Osgood machine, isn't it? A. That is the Osgood Company machine, a general view of the machine and the site, with the initial view of digging, and with the bottom closed.

The machine is stationary at this point in the film, that view just showing the right hand side of the machine.

The view has now changed showing a close-up of the machine, and touching the ground in the initial position of excavating.

At this point they were contacting so as to open the upper end of the channel and the rear face of the stick, which contact with the under edge of the bridle, functioning in lieu of the stops of the plaintiff's machine.

That view has changed, and the machine is excavating a trench in the normal manner, swinging to the right hand side and discharging by inversion.

Returning for an additional stroke; the bottom has been opened by pulling upon the latch line and is now being closed by momentum, by manipulation of the hauling and hoisting cables.

The rotated scoop is swung about to various points in the revolution of the machine and closed, and a measuring stick has been placed against the scoop, illustrating or showing the height; at this point the view changes, and a close-up is shown of the open scoop in contact with the ground as in the initial position for the rooting operation.

The scoop is drawn through the material, or has been in the stationary view here shown, with the side rake teeth only engaging.

The view changes, and the scoop is being drawn into the trench to illustrate the tilting of the stick for undercutting. Here the stick is shown sloping towards the lower right hand side a matter of a few degrees.

Again the view changes, and the links are seen to be disaligned from the direction of pull of the hoisting cable. Illustrating the function of the links used as a lever for causing outward kick in the scoop.

Then the film here, which is of the Keystone, also is shown here striking a gravity blow of from 8 to 12 foot drop. Mr. Elmire is operating the Keystone machine. This is a height which is excessive for commereial use and hard materials. This illustrates the potentiality of the machine for striking a severe blow. Commercially, from 3 to 4 foot drop is used more frequently.

Here is a view of the Keystone machine showing the operator's two hands engaging the two levers required for operation.

Q. The last view was the similar view of the Osgood machine, wasn't it? A. Yes, sir. The film, I believe, was broken. A part of the film has been broken off, which shows a corresponding view of the Osgood operator.

Mr. Richey: I offer the film in evidence as Plaintiff's Exhibit P-70.

(The defendants then proceeded with the film of machine operating in Chile previously referred to, with explanation of the views by Mr. Mahoney.)

Mr. Mahoney: The first picture shows the ordinary railroad type shovel being used at the Chile Exploration Mines, Chuquicamata, Chile.

This is still a regular railroad type of shovel.

Now here is the shovel in question. This is the 225-B electric Bucyrus shovel, loading into cars with the front dumping dipper on it.

There it is cutting into the bank.

The Court: What kind of material is that?

Mr. Mahoney: That is a very hard material; rocky material; copper ore.

There it is shown dumping into a car, and the dipper snapping closed after dumping.

Here is a closeup of the dipper itself, dumping into a car, shows the momentum closure and clamping shut after dumping.

This is a general view of the mines in which the regular shovels operate.

This film is offered in evidence as Defendant's Exhibit 127.

Mr. Richey: We object to it. It is incompetent and not properly proven, and is immaterial, as illustrating something that was done abroad and not in this country.

The Court: Well, I think I will overrule the objection and you may have your exception.

Mr. Richey: All right.

Mr. Mahoney: We also offer in evidence at this point as a group some pictures that were taken from the film, as Defendant's Exhibit 128.

Mr. Richey: Same objection, and I assume the same ruling.

The Court: What are those?

Mr. Mahoney: These are just enlargements taken from the film itself.

The Court: They may be admitted and you may have your exception.

Examination of witness Rex R. Downie resumed by Mr. Richey:

Q. Mr. Downie, how does the range over which the plaintiff's machine operates to avoid the blind spot com-

pare with that of the defendant's machine? A. I believe that the range in plaintiff's machine is a little greater than that in the defendant's.

Q. Is the range over which the defendant's machine operates a useful range? A. Yes, sir; it is a useful range.

Q. What was the condition of the corner of the stripe of the channels along the stick in the Osgood machine which engaged with the links? A. That corner, or the corners at the upper end of that channel, were chamfered in such a way as to indicate plainly that contact with the bridle was intended and provided for.

Q. In the construction of the ditcher stick of the defendant's machine the plates which connect the two channel parts extend along the stick, whereas, as shown in the first Downie patent, these parts extend only part way; what, if any, difference does that make in the operation of the sticks of the machine? A. No difference, except as a matter of degree, that the defendant's stick would be a little more rigid than plaintiff's.

Q. In the first Downie patent, the parts 5 and 3 composing the boom are separate, and in the defendant's machine they are integral. What, if any, difference would that make in the operation of the machine? A. That makes no difference in the function and operation of the machine.

Q. In the bearing connecting the stick and boom of the first Downie patent there are two separate pivots, and in the Osgood machine there is only one pivot. What difference would that make in the operation, if any? A. That makes no difference in the operation.

Q. In the defendant's machine and the plaintiff's machine demonstrated to the court the boom can be rotated through the 360 degrees, whereas in the machine of the first Downie patent the boom can be turned only 180 degrees. What, if any, difference does that make in the operation or advantages of the machines? A. That makes no difference to it as a ditcher. The full revolution of the machine has to do only with the range, the angular horizontal range wherein the operator may discharge the load. It is a matter of delivery, not a matter of digging.

Q. Just a matter of degree of delivering? A. Yes.

Q. In one or both of defendant's machines the bolt through which the scoop is connected to the stick is mounted with the front edges flush with the front end of the scoop, whereas in the plaintiff's machine the bolt

is back of the mouth of the scoop. What, if any, difference would that make in operation or advantages? A. It would make no difference whatever. The actual fastening of the stick to the scoop is on the center line of the bail, or by bolts removed a little from it. The fastening is, in fact, in the rear of the scoop in all three of the machines referred to, and the functioning is the same.

Q. Would the functioning or operation or advantage be changed any by closing the top of the scoop, as the Osgood Company does? A. None whatever.

Q. Would the matter of the height of the bail make any difference? A. No, sir.

Q. In the third Downie patent, the bolt 33 passes through a slot in the stick, and in the Osgood machine the corresponding bolt passes through a round hole in the stick. What, if any, difference would that make in the operation or function? A. None whatever. The bolt is used in both instances to clamp the flanges of the overhead bail against the fore and rear sides of the stick base, and this function is served equally well between a loose fitting or tight fitting bolt.

Q. Have you brought with you a drawing to illustrate the effect of a blow upon the machine, the Joplin machine, said to be illustrated in Defendant's Exhibit 26? If so, will you produce that drawing and explain it, referring to the reference numerals? A. Yes, sir. I have a drawing—

Mr. Richey: Let Mr. Corbett see it and Mr. Reed.

(Drawing exhibited to counsel.)

A. (Continuing.) This drawing illustrates the construction of Defendant's Exhibit 26, this being a prospective view, and requiring an assumption as to the width of the scoop, which is not shown in the print Exhibit 26, but is taken as a normal or ordinary dimension. The scoop is here shown, presented at an angle of approximately 45 degrees to the ground, and the weight of the stick and part of boom weight exerted against the rear wall of the scoop. This is the nearest position in which a gravity blow of any effect can be struck; that is to say, the range of gravity blow striking extends outwardly or to the right from the position here shown. This is meant to illustrate the fact that in the Joplin construction the weight of the stick is delivered against the end wall of the scoop and in the striking of the blow would have had the effect of dishing or blowing downwardly that end wall, and further, the effect of blowing outwardly the side

walls, thus distorting the scoop shell, and in time, of course, causing fracture of it. Such distortion would inevitably, in my judgment, eventually, if not immediately, depending on the severity of operation, cause a binding of the bottom pivots marked "D," which in this view are shown as clip angles, "h," pivoted to the side walls. The structure as a whole I should have said consists of the corresponding parts as those shown in Defendant's Exhibit 26. I believe I need not enumerate all of the elements, except that the side walls to which I refer as being bowed are marked "A" in this view, and the end wall is marked "b." The stick is marked "j." It will be noted that there is no bridging or supporting member spanning the width of the scoop except the bottom and the end wall. The braces in the way of spanning it all are loosely pivoted at the upper and lower ends, and hence have no bridging or bracing effect. Corresponding comments would apply as to the collapsing bowing of the side walls when the scoop is forced between converging hard surfaces in the excavating of a trench. The lack of bridging weakens the scoop both against spread and compression pressures.

The Court: That is the blueprint that the defendant put in showing the Joplin scoop, was it?

Mr. Richey: Yes, the Joplin machine.

Mr. Corbett: Only one of the Exhibits, Your Honor. Pardon me—are you speaking about Defendant's Exhibit 26?

The Court: That is the blueprint you put in.

Mr. Corbett: That was only an exhibit of the diagrammatic shown.

The Court: It was a blueprint that was shown the witness who testified about the Joplin machine. I am just trying to identify it.

Q. What effect would the bowing of the back as you have shown there have upon the latch? A. It would, I believe, render the latch inoperative. We have encountered such bowing occurring, in not as great degree as would occur in the scoop so mounted, but occurring by way of partly weight or inertia of the end wall itself, and so great as to destroy the latching mechanism. That is in our commercial machine, and in experiments we had wherein the stick is a spanning bridge overhead the scoop. So added stick weight and end wall inertia in the striking of the blow, I have no doubt that the destructiveness on the latch would be greatly increased.

Mr. Richey: I offer that in evidence as Plaintiff's Exhibit P-71.

Mr. Corbett: Well, we object to that.

The Court: Well, it is offered merely for illustrating this witness' testimony. It may be received.

Mr. Corbett: Highly speculative.

Q. Would the addition of the spring and rope and the two extra holes in the latch as shown in Defendant's Exhibit 73-3 remedy any of the faults of the machine shown in Exhibit 26, and give a brief reason for your answer? A. I would not remove those faults in the machine of Exhibit 26 to which I referred in my immediately preceding answer. That is, mainly bowing and distortion of the scoop shell, binding of the bottom pivots, and those other distortions which I referred to in the earlier portion of this trial, scissor-like distortion of the working of the scoop sides relatively to each other, due to eccentric loading and lack of bridging in the shell. The addition of the spring would in no wise present these body flexures, nor would the addition of the rope.

Q. Will you now refer to Morrison Patent No. 1,249,805, Defendant's Exhibit 115, and to the photographs said to illustrate the scoop shown in that patent, 116, 117, 118, and 119, and also to the scoop said to have been used in Chile, and illustrated in Exhibits 119-A, 119-B, 119-C and 119-D, and blueprint Exhibit 118, and any other exhibits and drawings and photographs and blueprints, and also in the moving picture said to have been made in Chile and offered in evidence as Defendant's Exhibit No. 127. Now, will you explain those to the court, and state whether or not in your opinion they would be available for inward arc machines, and give the reasons for your answer. A. There are two constructions principally referred to in your question: First, is that illustrated in the Morrison patent, and which is similar to that shown in Defendant's Exhibit 117? This is a forward arc scoop of which the bottom, or in that part called the front of the scoop, is pivotally attached to the body. It is the scoop of Morrison which was in the Cleveland suit, and which has been referred to as having excessive lead, and misconstruction of the latch and lack of side clearance capacity, as well as lack of swing freedom for the bottom, as would be required in the proposed adaptation of this scoop for momentum closed trench excavation. The Bucyrus scoop as we have been calling it—

Q. That is, the one used in Chile? A. The one used in Chile differs from the Morrison to summarize what I have to say about the scoops, principally in respect to the arrangement of the latch at the rear end of the scoop, and of course there are differences as to size and details of design, but I wish to refer to one significant change in construction. Whereas in the Morrison patent scoop a simple lever latch is used engaging a latch piece upon the bottom of the scoop at its one end and having at the other a compression spring bearing against the top wall of the scoop and holding outwardly the upper end of the latch, which arrangement is inadequate to prevent the bottom from coming open when the bottom is stressed, there is in this Chile or Bucyrus scoop a linkage, toggle link connecting the upper end of the latch with the end wall of the scoop, two holes being provided in one member, the end or lever member of the toggle, the one hole slightly off toggle or off alignment, and another hole directly upon toggle. That is to say, provision is made so that adjustment can be made by the operator to set up a toggle action between the upper end of the latch and the end wall, which would prevent any possible skidding outward of the lower end of the latch. This, I would believe, in the ordinary sense, from hearing the testimony here in regard to experiments with the Morrison, or a scoop similar to Morrison, by the Bucyrus Company, would follow as a result of what was found in that experiment, and remedies one of the points to which I have referred since my previous testimony has been referred to by Mr. Corbett as rendering the Morrison scoop not operative to do those things which the patentee intended. The necessity for this toggle about which I speak arises from the fact that the latch nib, the contact shoulder or ledge of it which engages the latch piece upon the bottom and supports the one end of the pivoted bottom, slopes downwardly and forwardly toward the tooth end of the scoop, and the corresponding part of the bottom slopes likewise, and it is obvious, and I know from experience with both skimmer and ditcher latches and scoops, that this slope will cause, or will permit, a coming open of the bottom when any weight is allowed to rest on such a latch. The action is simply that the latch skids from under, so to speak, the pressure developed by the bottom. Such pressure would be developed mainly or markedly in two instances, first, as when the teeth ride over the face of the excavation, and the weight of the stick or possibly power delivered through the stick, and the weight of the

scoop, are allowed to ride the teeth to force engagement. Such force of engagement sets up reaction in the ground that causes downward pressure at the rear end of the scoop, which may be very excessive. The second instance in which downward pressure would be exerted by the latch piece upon the latch would be if and when momentum closure is effected for the recoil or rebound force is very great, since the exact travel required for closure cannot at all or accurately be calculated by the operator, and so he always supplies plenty of motion. That is, he supplies enough and more to make it infallibly catch. Now, the rebound of the bottom causes a pressure which is the most likely pressure to snap latches off that I know of. Now, as I say, that defect of the Morrison scoop, which is what I had before me in testifying about it at Cleveland, has been met by the logical means of preventing accidental opening of the latch when we come to this Bucyrus scoop. Now, the comment, which is pertinent, I think, here, is that this toggle, if the links which have the bolts or pins marked 9 in the Bucyrus print 35,576, is so adjusted as to engage the other of the two bolts in the long lever, this toggle or knee joint, being, as it is said, locked, would positively prevent, unless the latch lever were pulled out by hand or by some means, the entry of the bottom. This is an obvious matter of mechanics, that unless the latch broke in two or flexed, or unless the lever toggle pointed to admit the bottom, the bottom would not enter. Now, it might be conceivable that a pull of the latch line would break the toggle at admission of the bottom enough to get the bottom closed; whether this could be done with the split-second rapidity necessary to catch a momentum clam bottom, I doubt as a mechanic. The other points about the Morrison and this scoop, and which are in the main in common, both as to their intended use, as I understand from the testimony, and as to the remarks as to their inapplicability to trenching, are as I have said, lack of side clearance, the lack of swing freedom of the bottom, and excessive load. I believe Mr. Ferris has said that he would alter the latches of these scoops, or of one or the other of them, for trenching, as I assume that no more time need be put upon that.

Now, as to bottom swinging freedom for momentum closure and for spot discharging of the load, I think the point is important, and I would not wish to retract the comment I made in that regard in the Cleveland suit. It

is necessary that a bottom for discharge of these materials in a ditcher shall have freedom of 180 degrees. We have tried making bottoms with less than that, and we know the effect; it is very destructive of bottom pivots, and it is very hard on side plates. We find that our present swing freedom, and we provide about 190 to 200 as in our present commercial ditchers, is not more than enough. The occasions where this swing freedom, that is, Your Honor, the capacity of the bottom to swing freely clear around until it is upside down, as it would be in this view here, is this, or are these: First, in dumping it is frequently desirable to shoot the load; that is to say, to swing the scoop to or nearly to the full outreach and then discharge the load practically at the furthermost lift of the scoop. So discharging a scoop, you will see that with the bottom inclined about 45 degrees, and horizontal to a point downwardly or leading to the bottom and all falling, carries the scoop 135 degrees open back by the load itself. Now, if you allow that bottom to fetch up against stops or resistance, it is very destructive. There is an opening requirement of 135 degrees, and the momentum of the bottom will carry it easily to 200, and should be allowed to carry it to 200. Now, in the actual closing of the scoop, it is frequently desirable to close a scoop at or nearly full outreach. This is impossible if the bottom will only open a matter of 90 or 100 degrees, which we understand the construction to be here. None of the figures show it opened that far; none of the views of the movie, as I followed it, showed the bottom open even 90 degrees. None of these scoops, in other words, give into this back the 90 degrees of swing freedom which I think is necessary.

Now, as to the side clearance, I do not want to take more time than necessary upon these things, but in view of the swing freedom which really is necessary, it is not possible to use these bottom teeth to cut side clearance, for these teeth would interfere upon the forward edges of the side wall of the scoop in somewhat the same manner as that earlier skimmer of that side tooth that Keystone used and which Brown Hoist used subsequently interfered in precisely the way that ours did, but I know that that was the reason for our abandonment of it. So a tooth would have to be supplied to either the Morrison or the Bucyrus scoop for practicable drainage excavation, and even for most cellar excavation; that is, in all cellar excavation except the soft material. The tooth would have to be fastened to the side walls, and the bot-

tom pivot would either have to be avoided or construction resorted to which would carry more collapsing strength in the tooth and down to a sufficient level to insure against the setting up of the shoulder th[illegible] Of course the question as to whether that tooth co[illegible] be supplied, and how much of a job it is, I can only refer to our own experience, that it was necessary in our case to reconcile the antagonisms that there were or which developed out of the fact that the bottom pivot had to be located at precisely the point at which the side rake teeth had to be secured. And that removability is highly important; the side pressing strength of the tooth is extremely important, as it is in any other tooth used anywhere in excavating, so far as I am aware—a double function tooth, digging downwardly, right along with its cuts at the bottom, and capable of resisting laterally pressures to which no bottom tooth is ever subjected, since the entire force of the machine is delivered to pull the scoop in between converging surfaces.

Q. Now, on that point, it has been alleged here that some of these outward arc machines closed their bottom by gravity. Isn't it a fact that the force and movement available in the outward arc and inward arc machines are different? A. Totally—not totally different, but markedly different.

Q. Will you explain briefly the differences between the two, and why the problem of closing the bottom by momentum of the inward arc machine is different from that of the outward arc machine? A. In the Keystone commercial machine there are just two lines for effecting the four primary movements of excavation, as we have said previously. In the forward arc machine, such as the 225-B Bucyrus shown there in the movie, and which I believe I have seen casually in the field, and, as stated by one of the witnesses, to be powered by electric power, the stick is reciprocated through the boom by the reversing, in that case, electric motor, and in earlier cases, steam engine. The point to that is this, that the reciprocating of the stick and the power application to the scoop through it is not a one-way power channel. It is the full equal of two cables, for, in the absence of the reversing electric motor, or the reversing steam engine, to perform it with the same positiveness as such prime movers, two cables are needed, one attached to the upper and one attached to the lower, and there are outward arc machines in the field driven by gasoline in which there is

no such thing as a reversing engine, having two cables, one attached to the upper end and one attached to the lower. Therefore, I have said in this and the previous case, and have considered and represented, and still believe, that the reciprocating stick which is capable, not only of delivering tension upon the scoop or pressure against it, moving it positively in two ways by artificial means is equal to two power members on it. Then there is in all of these outward arc scoops the hauling or bucket line. They sometimes call it the hoist line, but it is not to be confused with the hoist line as we have referred to it here in ditcher discussions. Now, therefore, I have said that the premises of closure and of scoop manipulation are definitely different in all of these outward arc machines from what they are in these commercial ditchers, the one is a three power member, and the other is a two power member. So that even if momentum closure were effected by the reciprocation of the stick, with or without coordinated manipulation of the dump line, it would not teach closure and did not teach it, and has not led to its adaptation in the industry.

Q. When did you first conceive the invention of the first Downie patent, No. 1,511,114? A. In the summer of 1920.

Q. And what, if anything, was done towards working upon that invention between that date and December, 1920? A. I was busy during that time getting the drawing into shape and constructing a trial unit and the scoop, getting it out to the field and testing it.

Q. Now, who was your patent lawyer at that time? A. Mr. E. J. Siggers.

Q. Of Washington, D. C.? A. Of Washington, D. C.

Q. Did you take up with Mr. Siggers the question of taking out a patent on this machine? A. Yes, sir.

Q. And when was that, first? A. That was in December, 1920.

Q. Do you remember the date? A. It was in the latter part of December, about the 20th or 21st.

Mr. Corbett: Your Honor, if I may interrupt here—my understanding is that the allegation of conception here is subsequent to the Joplin experiment; is that correct?

The Witness: That is not correct.

Mr. Richey: Well, wait a minute—subsequent to the Joplin experiment but not to his knowledge of it.

Mr. Mahoney: Well, that don't make any difference, about your knowledge.

Mr. Corbett: I just want to make that point clear. It has to be clear some time; it might as well be now. I understand Mr. Downie testifies that his conception of this drop bottom was in the summer of 1920.

The Witness: Yes, sir.

Mr. Corbett: And the Joplin experiment was in March, 1920.

The Witness: Yes.

Mr. Richey: I think that ought to be presented in argument, shouldn't it?

Mr. Corbett: I just wanted to fix it, is all.

Q. Do you remember whether or not the machine of this first Downie patent had been tested out before you submitted it to Mr. Siggers? A. Yes, sir, it had been tested.

Q. Can you produce a letter to Mr. Siggers on that question? A. I have a letter written by R. M. Downie, my father, General Manager of the company, and reporting—

Mr. Williams: Just a minute—this is a letter to whom?

Mr. Richey: Mr. Siggers, the patent lawyer.

The Witness: To Mr. E. J. Siggers.

Mr. Williams: I would like to see that before any testimony as to its contents.

The Court: You are offering this in the main patent case?

Mr. Richey: We are offering this, Your Honor, to show Mr. Downie had this information before he learned of the Joplin job. It is on the suppression of testimony.

The Court: It is, you say?

Mr. Richey: Yes.

The Court: Well, I suggest that you and Mr. Corbett both keep that separate, if you can.

Mr. Richey: I am starting on that now. You mean, put the expert testimony in, and then take him off and put him on again on the other?

The Court: Yes.

Mr. Richey: Well, that is satisfactory, then. We will recall him then for this testimony.

Mr. Corbett: Yes, that is all right with me.

The Court: Let Mr. Corbett start cross examining, unless you want something further.

Mr. Williams: Does the court insist upon the rule of cross examination by only one counsel of the witness?

The Court: We won't now if you separate this,—on the line of suppression of testimony. You can let Mr. Corbett examine him as to these patent matters, and get that out of the way.

Mr. May: If the Court please, it has been agreed by counsel for the defendants that photostatic copies attached to Mr. Martin's deposition of the four vouchers may be substituted, so that they may be taken back by Mr. McElhany.

The Court: You have the photostatic copies here, have you?

Mr. May: Yes, Your Honor: P-64, 65—and I don't know how they are numbered there.

Cross Examination by Mr. Corbett.

Q. I hand you Plaintiff's Exhibit P-18 and ask you to refer to page 33. A. Yes, sir, 33 or P-18.

Q. Upon a request of you to read from a certain catalog or catalogs of your company dealing with the digging of rock, you read from page 33 of that catalog, Plaintiff's Exhibit P-18—is it 18?

The Witness: P-18 is the number.

Q. The record as we have it indicates that your reading from that subject matter on page 33 was incorrect. As the record shows it, at the top of this page the first full paragraph is started by the following sentence: "The ditcher scoop can be operated in any material that can be dug mechanically. The presence of frosty ground will be no impediment. While we do not claim for the machine that it will dig hard rock, and so forth"—you left something out of that sentence, did you not? A. Yes, sir, there is an omission there.

Q. What is the omission after "impediment"? A. After following "impediment", if literally read—"when the ditch has once been started and the scoop can be drawn against the hard crust from below."

Q. So that, instead of that sentence saying that the presence of frosty ground will be no impediment, it said, did it not, that the presence of frosty ground will be no impediment when the ditch has once been started and the scoop can be drawn against the hard crust from below; is that correct? A. That is correct. Whether I read it that way before or not, I don't remember.

Q. At the demonstration of the Osgood machine at the Sam Davis coal yard, it is a fact, is it not, that every-

thing you requested our operator to do, either directly or through me, was done? A. There was one thing, Mr. Corbett: Mr. Green would not show us the way we wanted him to show us of striking the gravity blow.

Q. Any request you made through me was performed, is that not right? A. No, sir, I think I requested of you, plainly, at least twice as being the reason why I wanted Mr. Elmire to operate, in case Mr. Green could not do it, that the machine be used to strike a blow.

Mr. Corbett: I want to state on the record, Your Honor, anything requested by Mr. Downie that we do was done. I did not care to have a strange operator operate that machine, not knowing anything about his ability. Therefore, I refused, on my own authority.

The Witness: In the main I would say that Mr. Corbett and Mr. Green accommodated us as to what he did with the machine. I have only that one exception.

Q. You have discussed at considerable length the possibilities of the device as operated at Joplin, Mo., by Bern. Clutter, that is, the drop bottom device. Did you see that operate, or any portion of it? A. No, sir.

Q. So that your testimony as to whether or not that device would operate in any particular is based merely upon your own opinion, is that not right? A. Based upon my opinion, in view of the exhibits and testimony as to what the device consisted of, yes.

The Court: If neither counsel want those letters, the Clerk had better take them. Do you want them, Mr. Williams. They are the Bern Clutter correspondence.

Mr. Williams: I want to look at them.

Mr. Corbett: That is all.

CROSS EXAMINATION by Mr. Reed.

Q. Mr. Downie, when did you first make a tooth like these shown in Plaintiff's Exhibit P-63, the wooden model? A. That would be—

The Court: Is that a wooden model of the two claimed to be infringed?

Mr. Reed: No. He says it is a forerunner of the tooth of the four Downie patents.

The Witness: A forerunner—this is the tooth.

Q. P-63? A. P-63, which we first used. It is the first tooth of this form which we used commercially. Does that match what you state? And it was developed

—to answer Mr. Reed's question, this tooth was developed in September, October or November of 1924.

Q. When was it first used commercially? A. In December, 1924, or very early in January, 1925.

Q. You questioned my statement that this was a forerunner of the patent. Do you consider this as within the patent? A. Yes, sir.

Mr. Reed: That is all.

The Court: Anything further from you, Mr. Richey, outside of this other issue, we do not want to go into that at this time.

Mr. Richey: What was the last question and answer?

(Last two questions and answers read.)

The Witness: I would like to state, further, on that answer, the patent was drawn, in other words, upon this tooth for the protection of it.

Mr. Richey: Now we will recall Mr. Downie for this other testimony.

The Court: Is he going to be here right along?

Mr. Richey: Yes.

The Court: Why not take it up after you get through with all these patents?

Mr. Richey: All right.

The Court: You are excused for the present.

Thereupon the plaintiff called ROBERT C. SESSIONS, who, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Richey.

Q. Mr. Sessions, you have been present during the testimony of Mr. Downie all of the time, have you not? A. Yes, sir.

Q. You have examined all of the prior art patents he has discussed, have you not? A. Yes, sir.

Q. You have examined the photographs and drawings of all these other machines illustrated here in the defendant's exhibits, have you not? A. Yes, sir.

Q. You were present at the test of the Osgood machine on March 11th, 1931? A. Yes, sir.

Q. Do you or do you not agree with the opinions expressed by Mr. Downie as to the operations of these various machines and their advantages and their comparisons with the machine of the patent in suit?

Mr. Corbett: We would like to enter an objection to this question and any answer thereto, based on the ground that it is entirely contrary to the rules of evidence for any witness to merely O.K., or say yes, to a long line of testimony given by another witness; secondly, because the qualifications of this witness, as set forth when he originally went on the stand, indicate that he is clearly not qualified to answer that question.

The Court: Why do you make the latter statement, Mr. Corbett?

Mr. Corbett: The witness stated, in the first place, that he only observed, closely observed, this back hoe machine over a period of one day.

The Court: I guess that is true, Mr. Richey, he has not the same practical experience as Mr. Downie has.

Mr. Richey: No, that is true.

The Court: Of course he could not testify from a practical point of view, could he?

Mr. Richey: No. But I asked him about his opinions.

Mr. Corbett: I also believe, Your Honor, it is unprecedented for one witness to cover the same ground another one has, an expert witness. Objection on that ground, also.

The Court: I am trying to save time. This witness testified on direct examination.

Mr. Corbett: Surely.

The Court: How long do you think it would take to go over this?

Mr. Edgerton: About an hour or an hour and a half.

The Court: Let us go over it then, if counsel does not want to expedite it.

Mr. Corbett: I do want to expedite it, but I feel—

Mr. Richey: All right. Let Mr. Edgerton examine him.

DIRECT EXAMINATION by Mr. Edgerton (Continued).

The Court: I refused to do it when he first testified. It seems to me now we have reached a point where we can all save time by doing that; and he can tell the instances in which he did not agree with this witness.

Mr. Corbett: I hate to drag it out as much as anyone, but I do not feel that I could.

The Court: All right. Go ahead, Mr. Edgerton.

Mr. Richey: We will make it as short as we can.

The Court: All right.

Q. Referring, first, to the references discussed on the Clutter patent by the defendants' experts, will you take up the following patents and describe them briefly: Rood, 386,438; Rood, 1,057,457; Webber, 557,350; Webber, 528,312; King, 579,589; Jobb, 11,496; Olson, 826,051; Fairbanks, 892,508; Fairbanks, 1,056,268; Bishop, 1,100,864; Mahoney, 1,194,264; Sweet et al., 1,208,230; using any charts or drawings you may wish. A. Patent 386,438, to E. O. Rood, is a machine for digging two parallel ditches; the machine is constructed with two booms, and a complete duplication of parts, as far as the stick and scoop are concerned. This chart No. 1 shows a reproduction of Fig. 5 of the patent, in which only one of the booms is shown. The operation of this machine is such that the line No. 22 of the patent acts as a combined haul and hoist line, that is, in the digging operation, as the scoop is passing through the dirt, the boom is stationary. The scoop is pulled through the dirt by the line 22. When it reaches a position against the lower side of the boom, line 22 then acts to raise the boom, and, as it is being raised, there is provided, as seen in Fig. 13 of the patent, a sloping trap. This also appears in Fig. 1 of the patent drawings. This sloping trap, which is not shown on this large drawing, but is under the roller marked 5, is so positioned that the scoop is swung out of the ditch as the boom is elevated. The scoop is provided with a line 18 which is the dumping line. When the boom is raised off to one side of the trench, it is held in its elevated position; and the pulling on the line 18 causes the scoop to be extended, as is shown in Fig. 5 of the patent, for dumping by simple inversion. This machine as it is shown and described in the patent is equipped with two complete sets of all these parts, as I have said before, and these parts are so connected that when one is down in a trench digging, the other one is up in the air in the dumping position; and they serve more or less as counterbalances, one against the other; and this condition exists because of the fact that the drive shafts for the two units are rigidly connected together, so that, as one is going up, the other is coming down, and vice versa. For this reason any such action as obtained by Clutter in stick change of direction of operation for overcoming an obstacle in a trench, or what has been termed packing or pawing of the scoop, is utterly impossible because of the counterbalance action of these two scoops on the end of their respective booms. If the operator attempts

to reverse his position of the scoop in the trench, similar motions would occur in the scoop which is up in the air, and this scoop in the air would merely be waving around.

The Court: You could not strike a gravity blow with that machine either?

A. No, sir. Any repeated motion by either scoop would be prevented by the counterbalance of the opposite scoop, of course, as I explained. During the digging operation the scoop is limited to motion through a fixed arc in only one direction, at only one level. The boom is held down for the digging by means of a spar C which, at certain stages of the digging operation, is necessary, because if it were not for this spar, the boom and scoop would be lifted out of the trench because of the fact that a single line is used for both the hauling in on the scoop for the digging operation, and for raising the boom after the scoop has been swung around into the completion of its digging stroke. This scoop, as shown in the patent, is not capable of ditch digging a single width trench because of lack of any means for cutting a clearance for the scoop, and the fact that the bail is attached to the outside of the scoop, and the trench would not be cut so that the scoop would clear itself.

The patent to C. W. Rood, 1,057—

Mr. Edgerton: Pardon me, Mr. Sessions.

Q. Before passing to that second patent, do you agree with Mr. Turner and with Mr. Downie that the Rood machine is the best reference against the Clutter patent?

Mr. Corbett: Objection.

The Court: Let him answer.

A. Yes, sir, I do. I think that this is not very close to Clutter, but it is nearer than any of the other references.

Q. Now you may take the next one. A. The machine of patent 1,057,457, to C. W. Rood, is a machine which has a combined haul and hoisting line, as the other Rood patent. The boom is stationary in a fixed position during the digging operations, and the scoop travels through a fixed arc. The combined haul and hoist line is the line H of the patent. The line I in the patent is the dumping line for inverting the scoop. The scoop is pivotally mounted or mounted in a non-fixed manner on an arrangement of two arms, G and G prime. The boom which is fixed during the digging operation is E. This

patent likewise could not strike a gravity blow because of the control of the boom, and the positions assumed by the bucket during the operation. The scoop is not suitable for single width excavation because of the fact that it does not cut a sufficient clearance. This machine does not permit the manipulation of the scoop in any one of the four directions at any instant by means of control of two levers by the operator, as does the Clutter machine.

Q. Will you take up the Webber patent, now, please, 557,350? A. The patent to Webber, 557,350, shows a machine which has been termed a Vulcan machine, at times. This is a machine of the general class of an outstroke machine, turned around to act in such a way that the scoop moves toward the machine instead of away from it. It embodies all of the elements of an outstroke machine, in that the stick is moved in and out under power control in two directions, and power control in a third direction is obtained by means of the hauling life which is attached to the front of the bucket.

The machine of this patent, and also the machine of the Webber patent 528,312, are similar in all general respects; the differences relate to the general construction of the overhanging supporting member. This machine corresponds in all particulars to the outstroke machine. It is merely a matter of a strong overhanging beam, long enough to be unsupported at one end so that it can have mounted out at that point the ordinary stick and bucket combination of the outstroke machine, in such a way that the scoop moves in towards the machine instead of away from the machine. The machine cannot be operated with the stick in a direction beyond the vertical because there is no means for sending the stick out that way except the slight over-swing that may come as the stick is allowed to fall downwardly, it may swing up slightly, but not appreciably, beyond the vertical position. Any gravity blow would be when the stick is coming down and would be on the back end of the bucket; it would be a drop on the back of the bucket, but not a gravity blow in the sense of any digging blow. The machine operates in its digging only by the power of the machine, as do all other of the outstroke type of machines. This machine is totally unsuited for a gravity blow or picking or hoeing. It cannot accomplish single width cutting because of the design of the bucket, which is not proper for clearing. The bucket is an end-dump bucket.

The patent No. 579,589, to King. This patent falls in the same classification as the Webber patents which I have just been discussing. It is similar to an outstroke machine, except that a beam structure has been built up overhead, a massive structure suitable for supporting the stick at the end of that so that the bucket can be operated inwardly towards the machine instead of out, as is more commonly done. This patent is not of course capable of striking a gravity blow or of picking. It cannot be used for single width trench work. It has the same sort of control as the Webber patents, in that there is a line for hauling the bucket through the material, and a power drive mechanism on the stick by means of which the stick is moved in two directions by power. This machine of the King patent is the machine, I believe, which was used in the Phosphate rock digging in South Carolina, which was discussed. This machine is no more capable of digging hard materials, in the sense that the Clutter and Downie machines are, than are any of the other ordinary outstroke machines.

The next is Jobb, British patent, 11,496, of 1903. This, again, is the same sort of idea as the King and Webber patents, that is, a reverse outstroke machine. It has six, a haul line; line 16, which is a dump line for, I believe, opening the end of the bucket; and the stick is moved by power in two directions through a rack and pinion arrangement. The machine dumps only in one position, that is, with the scoop drawn up toward the machine, and with the stick in a horizontal position. This machine of course is not capable of striking a gravity blow, or of performing the desirable functions as accomplished by the Downie and Clutter patents.

Patent 826,051, to Olson. This machine has numerous power control lines; a line 28 is the hauling line; line 30 is a line which causes the stick to be pulled up through a sleeve 22, attached to the boom; and this line 30 can, to a certain extent, pull the scoop up beyond the position in which the stick is vertical. Line 14 is attached to the boom. This line is apparently used for raising and lowering the boom, although I don't think that the operation is such that the boom is raised and lowered very often. This mechanism is of course suitable only for being pulled through very soft material. The stick is free to rotate in this sleeve 22, so that the bucket striking an obstruction on one side or the other would cause and allow the stick to turn in the bucket, to swerve from one side

or the other; and very little downward pressure is obtainable. The only downward pressure of the material is due to the weight of the stick and the bucket resting upon the ground. The machine cannot strike a gravity blow. The scoop is of the end-dumping type.

The next is patent 892,508, to Fairbanks. This machine has a fixed boom, that is, the boom cannot move vertically; it is only free to swing in a horizontal position. Any digging that is done is done in the inner quadrant; that is, the stick is not extended beyond the vertical; the digging is done solely toward the machine. The stick slides through a fixture 24, so that it moves up or down to suit the elevation at which the digging is being done. The scoop moves during the digging on a fixed arc toward the machine. The discharge of this machine is, or the radius of discharge, the zone in which discharge can take place, is naturally very limited. The bucket or scoop 48 is loosely pivoted to the end of the stick 25, so that this bucket does not have the fixed presentation, during the digging operations of the Clutter and Downie patents. It is impossible to use this scoop for single width cutting because of the character of the attachment of the bail to the scoop, and the fact that the scoop is not, and the pivots which connect the stick to the scoop extend out beyond the sides of the scoop, so that they would be seriously worn and destroyed in digging in a single width trench. The scoop is discharged by allowing the bucket to trip downwardly so that the material falls out of the open mouth of the bucket. This machine is not capable of striking a gravity blow.

Patent 1,056,268, to Fairbanks, employs a combined hauling and hoisting line 22. This line acts to pull the scoop into the material, and then to elevate the scoop and boom 11. The scoop is retracted or moved outwardly away from the machine by means of another line, 23. The digging cycle of this scoop is really in a vertical direction through the material up the side of a bank. The scoop is swung in to enter the material and pull upwardly, so that the digging occurs only in that one cycle. The scoop is provided with a gate 16 which, during digging, swings back against the back wall of the scoop and in the dumping operation is pulled out to force the material out of the front end of the scoop. When the scoop is extended beyond the vertical position, the gate is towards the front of the scoop, and this would have a serious effect if any attempt were made to strike gravity blow with

this scoop, although, as a matter of fact, by the use of this combined hauling and hoisting line 22 and the scoop inverting line, there is no means by which a gravity blow could be struck with this scoop. This machine of course is also not capable of cutting a single width trench or ditch because of the mechanism surrounding the scoop and the type of that mechanism.

The next patent is 1,100,864, to Bishop. The machine of this patent is an entirely different class of machine from that of the Clutter patent or the Downie patents in that the boom F is held in a fixed position during the digging stroke of the scoop. The stick Y is pivoted to the ends of the boom, and the line 7, which is used to elevate the boom, is attached to the pivot point of the stick and the boom. Because of this fact the stick cannot be extended beyond its vertical position, and the digging must occur from the vertical position of the stick inwardly towards the machine, and only in that range. The digging is done on a fixed arc, and the machine is dumped in a single position by means of a mechanism whereby a lever attached to the stick comes in contact with another lever, small Q, attached to the fixed boom E, so that the scoop is dumped in that one, and only one, position. The machine cannot strike a gravity blow; is not capable of cutting a single width; is not capable of digging in hard ground any more than ordinary outstroke machines.

The next patent is 1,208,230, to Sweet, et al. This is a machine which has a fork-like arrangement at the end of a stick. This is not of course, in any sense of the word, a scoop, as we are talking about in this case; but the stick to which this mechanism, fork or other mechanism, 79, is attached, is arranged to slide up and down through a sleeve at the end of the fixed supporting member 62 and 59. This stick is marked 69 in the patent, and it can move up and down through the sleeve. This patent of course does not show a boom which is free to move in a vertical plane. It employs at least three lines in its operation, lines 71, 84 and 87.

The Mahoney, 1,194,204, is a machine which uses three power lines. These lines are the line 50, which is used to haul the bucket in toward the machine, the line 44, which hoists the boom and is continued around the sheave 33 at the end of the boom to a point at the lower end of the stick 40. This connection is at 35, so that the stick may be extended beyond the vertical by the action of this line. The third line is the line 34, which passes

over various sheaves to the sheave 36, at the rear end of the scoop, and then extends up to the point 35 at the outer end of the boom.

The Court: Is that the same machine used in the cornfield?

A. No, sir, this is not the same machine. It is the same man. The details of this machine are different from those of the cornfield machine.

The scoop 38 of the Mahoney patent is freely pivoted to the end of the stick, and the hauling bail 48 is connected to the same pivot point as the stick. This sort of a connection is such that this scoop can only be drawn through very soft materials. Any obstruction would cause the scoop to cant up or down and would result in considerable difficulty in operation. This machine cannot strike a gravity blow because the scoop is tail heavy and freely pivoted to the end of the stick. In attempting to raise the stick and allowing the scoop to fall to strike a gravity blow, the rear end of the scoop will drop down so that the teeth will not properly be presented to the ground. It might be attempted to—or rather a suggestion has been made by Mr. Turner that the line 34 could be so controlled that the teeth could be held in the proper position for striking a gravity blow. But the line 34 is controlled by a second operator, and that means the coordination of the three power lines by two men, which would, in my opinion, be impossible to do successfully for doing commercial digging where gravity blow work is required; or any work, not necessarily a full gravity blow, but merely quick reversals of the scoop back and forth for loosening the material, as is done in the Clutter and Downie machines, is impossible in this machine because of the pivoted attachment of the scoop to the stick. A reversal would cause the scoop to tip one way or the other, as can be readily seen. This scoop does not have any side rake teeth, and cannot be used for single width cutting because it would not cut a clearance for the pivot to the stick and the bail; the bail and stick would interfere with the sides of the trench. This scoop is discharged by hauling in on line 34, causing the rear end of the scoop which has previously swung down to be elevated and allowing the front open end to swing down to allow the material to fall out. In any attempt to extend this stick and control the position of the scoop, there is also involved the proposition that the scoop is freely pivoted, so that this line 34 is acting to do two

things; it is acting to extend the scoop, and the force on the line to do that would probably be such that the operator could not have any definite control over the position of the scoop.

Q. There has been some discussion about the Mahoney cornfield machine. Will you discuss that briefly, please. It is the Defendant's Exhibit—

The Witness: This is it.

Q. It is an enlargement of one of these Exhibits 34, I think.

Mr. Corbett: Are you offering the photographs in evidence?

Mr. Edgerton: Yes. You offered them in your deposition.

Q. You may discuss that. It is Defendant's Exhibit No. 4. A. The Mahoney machine, which has been called the cornfield machine, has a scoop freely pivoted to the end of a stick. It employs a line for hauling the scoop toward the machine; a second line which passes over a sheave attached to the top end of the stick through a linkage, apparently; and then down again to be fixed on the end of the boom. This second line is used for raising and lowering the boom, and there is another line which runs from a winch on the right hand side of the machine as one looks at the machine in the photograph, over a sheave attached to the very extremity of the boom, down to a smaller sheave attached to the rear end of the scoop by means of a cross connection rod; and then up and dead-ended on the boom at a point just slightly inward from the sheave at the very boom which this line has just previously passed over. This line is power driven, as are the other two, and is used for dumping the scoop which is tail heavy and which, when loaded, assumes the position with the open end upward, and in order to dump, it requires the operation of power to reverse and swing the open end down. This swinging taking place in the pivot which connects the scoop to the stick, so that it can swing freely. This machine is provided with a strut or spar on the outer side of the stick, and this spar is pivoted at the upper end of the stick, and extends downwardly to, apparently, contact with the back side of the top of the bucket, just how this contact is made cannot be clearly seen; but obviously the purpose of this spar was to prevent the back of the scoop from lifting up and canting or allowing the front of the scoop to tip down-

wardly when an obstruction is struck. This spar makes this scoop semi-fixed in a sense, but in no sense fixed, during its digging operation, as is the scoop of the Clutter and Downie patents; and of course this machine is not capable of striking a gravity blow, as I described in connection with the Mahoney patented machine, that is, the machine of the Mahoney patent, No. 1,194,204. This machine, in the sense of having a semi-fixed bucket during the digging operation, is somewhat closer to the Clutter patent than the machine shown in Mahoney patent 1,194,204.

The machine of Defendant's Exhibit No. 5 is another one of these Mahoney machines in which these same three power lines are used. The scoop does not have the spar or strut of Defendant's Exhibit No. 4. It does not have the linkage at the top of the stick to which the sheave is attached. The sheave at the top of the stick in the case of Defendant's Exhibit No. 5 is attached between spars which form extensions to the upper end of the stick, and are not pivotally connected to the stick. This machine is like the other Mahoney machines, in that it is incapable of striking a gravity blow, can only operate in very soft material, and cannot be used to cut a single width. An attempt has been made in this machine apparently to attach cutting blades or supporting pieces which have been marked X on Defendant's Exhibit 5, to the rear end of the scoop at the bottom. These apparently were used in an attempt to force the front end of the scoop downward as it is being dragged through the material and make it bite into the material, and also probably to loosen the material at the sides somewhat, although they are not in a position to be of any value in cutting a single width trench. This machine of Defendant's Exhibit No. 5 is also, in my opinion, further away from the Clutter patent, or not as close to Clutter, as the machine of Defendant's Exhibit No. 4, because this machine also does not have the spar which gave the scoop of Defendant's Exhibit No. 4 a semi-fixed position during the digging operation, and this machine employs a sheave at the top of the stick which is directly connected to the stick, rather than pivotally connected through a linkage.

Q. Now will you take up the patents discussed in relation to the first Downie patent, and discuss them briefly. Butler, 493,421, I believe, is the first. A. This patent to Butler, 493,421, relates to a scraper that has no application to a steam shovel ditcher, or an outward

arc machine. The bottom of this scraper is pivoted to drop down. It is the type of scoop used in drag line operations or work of that sort, where the scoop is in no way rigidly connected to a stick during its digging. The latch mechanism of this patent is not suitable for use with a ditcher or back hoe. The teeth are made from a strap called a plough B in the patent, which is attached to the front end of the scoop, and these do not move with the bottom as is the case with the patent to Downie, 1,511,114. The fact that the scoop was never intended for doing any real digging as far as the sheave on the member B is concerned, is evidenced by the fact that cutter blades or discs are employed in front of the scoop to cut and loosen the material; and this also indicates that this scoop was intended for use in skimming operations, such as cutting off sod off the ground and taking a light, skimming cut over the surface. The scoop is not suitable for single width cutting, because of the pivots and bolts on the sides are not protected. This scoop of course could not be used to perform the rooting operation.

Q. Will you now discuss the Davy patent, reissue, 11,516? A. This patent to Davy, reissue, 11,516, is somewhat similar in general purpose to that of the Butler patent that I have just discussed, in that this is a scoop for use with a drag line or other mechanism which will pull this scoop quickly over the top of the ground. It is not rigidly connected to anything. It employs a—

The Court: We will stop here until seven o'clock tonight.

(Adjournment until 7:00 P.M., May 11, 1931.)

(May 11, 1931, 7:00 o'clock P.M., hearing resumed.)

Q. Will you continue with your discussion of the Davy patent, re-issue, No. 11,516? A. This patent to Davy employs a cutting blade g which is mounted in advance of the scoop proper for loosening the material before it reaches the point of the open mouth of the scoop. This scoop is not fixed to the stick or any other means whereby it maintains fixed presentation of the scoop during the digging operation, and is not capable of cutting a single width trench. This is not a drop bottom scoop, because the entire scoop body is pivoted about the point x and the back end of the scoop drops down when the latch f is released, and the material is discharged through the back end of the scoop which is open when the scoop is swung downwardly about the pivot x.

The next patent is Pugh, 806,288. This patent relates to a mechanism in which the scoop is supported by cables and a sheave block arrangement n-5, and also by a bar n-3, referring particularly to Fig. 2. The machine employs several power lines. There is a power line n-15 which is attached to the front end of the scoop; a power line n-11 which acts on a sheave attached to the scoop; a power line n-4 operates the rack of the rack and pinion arrangement of the stick n-3; there is another power line which extends down the side of the bar r, and still another power line, apparently, which is attached to the outer end of the boom. This scoop is not rigidly mounted; its operation is outward, away from the machine, and upward. Fig. 20 shows the scoop in more detail. It shows the bottom of the scoop, which is a drop bottom scoop. The latch mechanism is such that the latch is opened by a cable connection to the point n-12 on a block holding a sheave at the top of the scoop. This scoop is closed by what is known or has been called snag closure; that is explained on page 5 of the patent, line 45. The teeth of the scoop are engaged in the bank, and the scoop is raised slightly,—or the teeth are engaged in the bank and the pressure thereon causes the bottom of the bucket to close.

This scoop can not be used for single width cutting, and of course this machine in itself is incapable of striking any sort of a blow, and cannot be controlled by two hands of one operator throughout its entire range of motion.

Q. Now, Clutter 1,107,899. A. This patent to Clutter, No. 1,107,899, is for a skimmer scoop. It digs by moving outwardly away from the machine over the surface of the ground. The scoop has a drop bottom. It does not have any side teeth. It has a latch mechanism, shown in Fig. 9 of the patent, which would be totally unsuitable for any sort of ditcher work in which severe blows are struck, because it would open itself due to the forces acting on the latch and on the walls of the scoop. A blow struck on the front of the scoop would cause the latch, as shown in the patent, to swing back and relieve itself. The latch as shown here is not suitable for momentum closure, and of course the pivot bolts for the bottom are not protected in any way, so would not be suitable for single width cutting in trenches. The scoop itself is shown merely as a thin shell of metal, which is not sufficiently braced, and incapable of use in a ditcher or back hoe.

Q. Wagner, No. 1,225,537. And in this connection, kindly discuss the side rake teeth. A. This patent is also a skimmer scoop, like the Clutter patent previously discussed, and much the same sort of a scoop. The latch mechanism is somewhat different, in that the latch itself extends down below the bottom of the scoop, so that this would in itself cause the latch to come open in being dragged through the ground in the operation which the ditchers are subjected to. The walls of the scoop are not rigid, and would be distorted seriously in ditcher action. Fig. 2 shows teeth extending out beyond the sides of the scoop, but as shown in Fig. 1, these teeth are not attached to the sides of the scoop. Therefore I assume they are attached to the bottom of the scoop, and teeth of this sort, of course, are prohibitive in any ditcher work where it is desired to have momentum closure of the scoop bottom, because they would contact with the front edge of the sides of the scoop when the bottom is open and prevent the bottom swinging more than about 90 degrees, not permitting the full 180 degree or more swinging opening of the bottom which is required in ditcher operations. This scoop, of course, as the scoop of the Clutter type previously discussed, is not attached to a stick, and does not function as the scoop of the Clutter and Downie patents, or of the first Downie patent particularly. The scoop of these patents to Wagner and Clutter is mounted to travel in and out along a beam, and the digging is done on a practically horizontal plane at the level of the ground.

Q. Now, there are two more Pugh patents. You have discussed the one patent to Pugh. Take up No. 1,316,485, first, please. A. This is a crane arrangement of the drag line scoop, in which the scoop or bucket is hung by a cable 16 from the end of the boom 7. There is a cable 9 which is used for raising and lowering the boom, and cable 51 which is used for pulling the scoop in toward the machine during the operation of skimming the dirt off the surface of the ground, as in the practice with drag line scoops. This scoop, of course, is not fixed in its manner of presentation to the digging, and it has a bottom which drops. This bottom is connected to the hauling line 51 by a lever arrangement here marked 28 and 30, which is arranged so that the bottom can open only when the hauling line is slacked off. And the latch mechanism also is controlled by a chain 45, such that the latch is open when the sheave supporting the bail 34 is

in a vertical position, and in order to maintain this latch closed the sheave supporting the bail 34 must be leaning towards the rear of the scoop. This scoop has no side teeth, and is not suitable for single width work. Of course there is no such thing as a gravity blow with this, or control in any one of the four directions at the will of the operator at any instant.

The other Pugh patent is No. 1,339,606, and this is a patent very similar to the Pugh patent just previously discussed, in that the scoop is hung from cables at the end of the crane boom. The bottom opening mechanism in this case is a toggle arrangement, 60, and the bottom opens—there is no latch on this scoop, and the bottom opens when the hauling line 19 is slacked, allowing the toggle to break. This scoop has no side teeth. It is not rigidly mounted on a fixed member, so that it has no fixed presentation for the digging surfaces, such as encountered in the back hoe ditchers.

Q. Now, will you please discuss the Morrison patent 1,249,805, referring also to Defendant's Exhibits 76 to 79, 70, 71 and 119-A. A. This Morrison patent relates to a scoop which is split approximately in the middle of the scoop rather than having an entirely drop bottom split on the diagonal. The scoop itself was used on the outward arc machine, but is not a scoop primarily designed for outward arc work, as is shown from the lead angle of the scoop. This scoop does not have side teeth, and can not cut a clearance for a pivot bolt, so that it is not adapted for single width cutting. The latch mechanism as shown in the patent is totally unsuited for any momentum closure, and is unsuitable for use in instroke ditchers where there are gravity blows struck, because the contacting faces of the latch are on an angle and the latch would come open, and the latch itself would tend to open during the striking of gravity blows because of the tendency for the top part of the latch to continue its motion towards the scoop body and open the latch. The scoop itself is clearly designed so that the bottom does not open completely in the normal dumping position of the stick. The Defendant's Exhibit 77 shows that the bottom is unlatched, and shows the normal position in which this bottom hangs when the scoop is in this position, which is in the dumping range. The tendency of a scoop of this sort of course is to not open sufficiently unless there is a load in there of comparatively dry material which in itself would force the scoop open

as the load is being discharged, and as the load passes out of the scoop, the gravity acting on the bottom will cause the scoop bottom to swing in and close itself. That is also true of this scoop of Defendant's Exhibit 118. This scoop of the Morrison patent is connected to the stick by means of pins which are in shear, the connection being very similar to that used on many of the outward arc scoops. The bottom of this scoop, furthermore, can not swing down much more than 90 degrees under any conditions because of the fact that the side plates of the bottom would contact with the side plates of the top part of the scoop and prevent this full 180 degree or more of swing opening which is required in ditcher scoops.

The scoop which has been called the Bucyrus scoop shown on Defendant's Exhibits 119-A, B, C and D, and as shown in this blue print, Defendant's Exhibit 118, is a very massive cast steel scoop, which, from the testimony, weighed some ten thousand pounds, I believe; I think it was maybe more than that, but it was a very heavy cast steel scoop, a large scoop,—much larger than the scoops used on ditchers. The features of this scoop are much the same as the scoop of the Morrison patent. There has been a change in the bottom, in that the line of opening is more nearly parallel with the line of the bottom of the scoop, and, as in the case of the Morrison patent, the scoop does not have side teeth which would cut a clearance for the pivot bolts of the bottom. It has an excessive lead angle for ditcher operations. The scoop is attached to the stick by the same sort of connection as is used in the Morrison patent. The latch mechanism of this scoop has been changed somewhat from that of the Morrison patent, although the latch itself is still on an angle and would tend to come open in operation. A toggle arrangement has been applied to the scoop as shown at the point 9 on the blue print, Defendant's Exhibit 118, apparently in an attempt to develop a means for holding this latch closed. Both of these scoops are of a quite different type of scoop from that used in ditcher operations. This Bucyrus scoop has the same objection as the Morrison patent scoop in that the bottom will not swing under any conditions open more than about 90 degrees because of interference between the teeth at the sides of the bottom and the side walls of the scoop.

Q. Now, the patents to Keith and Hoar—Keith 1,315,512. We have no chart of that. A. This patent to

Keith is for a machine which has a scoop attached to the bottom of a stick which is pivoted to the end of the boom. The machine employs three power lines, 26, for moving the upper end of the scoop toward the machine or moving the scoop a proper distance away from the machine; line 24 for pulling the scoop toward the machine; line 16 for raising and lowering the boom. This machine does not use a drop bottom and the scoop itself is quite improperly mounted on the end of the stick for ditcher operation because of the type of small bars, 23, which are used for the connection between the scoop and the bottom of the stick.

Q. The Hoar patent, No. 1,322,570. A. This Keith patent, to go back to it again, employs a stick which has a solid, apparently wooden, beam, as shown in these drawings, and does not use a channel iron stick.

This patent to Hoar, No. 1,322,570, is a machine devised primarily for use in coal mines where the head room is low and it is desired to dig on the level of the machine. It is an outward arc machine. The scoop acts, as shown in Fig. 3, down on the level of the machine, swings outwardly away from the machine, and the member to which it is attached is then drawn in over the top of the machine to provide means for dumping the scoop over the back end of the machine, either through a chute member which makes up the attachment to the stick, or the scoop may be dumped in the position shown in Fig. 1 by dumping through the end door of the scoop. This stick is made up,—or this member for supporting the scoop is made up of two channels, 18, which have their flanges pointing outwardly. The functions and the operation of this stick are totally different from those involved in ditcher operations such as the ditcher operations of the Downie patents.

Q. There is an illustration on the top of that chart, of the American railroad ditcher, from a catalogue, one of the defendant's exhibits. Will you please discuss that illustration? I think that is on page 37. A. This is an outward arc machine employing at least three power lines, one for moving the scoop outwardly, one for retracting it apparently here, and a line for raising and lowering the boom. The scoop is dumped by being pushed against a plate, bent from the end of the boom so as to force the material out of the scoop. The dumping, of course, is intended to be only in one position, over the tops of the cars, or, if it should not be over the tops

of the cars, it is at this one position with the scoop extended out towards the end of the boom. The stick in this case, or handle for the scoop, is pivoted to the under side of the boom. There is no upper arm to this stick, such as in the Downie patent. The stick is made up of a structural member of some sort, but of course the operation of this ditcher, as far as the stick is concerned, is different from that of the Downie patent, in that the machine is not used for striking gravity blows and is not used for single width cutting.

Q. Now, the patent to Olson, 826,051,—kindly discuss that structure. A. I discussed this patent in connection with the Clutter patent, and I think the same remarks apply there, as far as the first Downie patent is concerned. It is not a drop bottom scoop. The scoop proper is not mounted to the end of the stick in a manner suitable for back hoe use, wherein the blows are very severe. As I said in connection with the Clutter patent, this stick slides up and down through a sleeve, and the stick is free to rotate, so that the scoop is not fixed in its presentation to the material.

Q. Will you discuss the Joplin machine now please, referring to any drawings or exhibits here on the subject. A. May I have that Exhibit 26, I believe it is. This machine embodied a Clutter ditcher to which a scoop was attached. The scoop is somewhat of the type of skimmer scoops. It was attached in a manner such that the scoop could not swing downwardly, as it did in Clutter, because a wood block had been placed under the pin marked "pin for supports" on this blue print, Defendant's Exhibit 26. This, of course, does not serve in any way other than the latch itself of the original Clutter patent as far as maintaining the scoop in position is concerned. It merely makes it impossible to dump the scoop by allowing it to fall down. During all the digging operations of the scoop of the Clutter patent, the scoop is held in place by this latch member, which is just as rigid as the wood block; in fact a wooden block after operation for a short time would probably become splintered and allow considerable play up at this point where there is the pin for support. The scoop itself is not mounted any more rigidly than the Clutter scoop. The scoop braces or scoop supports, as they are called in this blue print, are just the same as those of the Clutter patent. The bottom of this scoop as it is shown here could not be closed readily by momentum because of the fact that the latch is so

constructed that it will not—the point of engagement is a very small one and the chances for its engaging are very slight because of the small distance through which it can travel and be engaged or not engaged. The latch as shown in this blue print does not have any spring or other mechanism for holding it in a closed position. A scoop of this sort, which consists of three walls practically unsupported,—no braces or other members for making it rigid, with a stick mounted in the middle of the back wall so that the forces of operation apply through the teeth and through the stick attachment to the middle of the back wall, would be seriously distorted in actual operation, as is represented in Plaintiff's Exhibit P-71, showing how the sides would buckle and the end wall would bend inwardly to destroy the latch connection and tend to open the latch if it was closed. Even slight bending motions in these side walls of this scoop would have very serious effect on the pivot bolts of the scoop in which it is desired to use momentum closure, because those pivots must be such that the bottom swings very freely and must not bind or become damaged in any other way, or else it is impossible to properly close the bottom by momentum, as is done in ditchers, because the bottom must be swung through a considerable arc; it is not a mere matter of closing by the weight of the bottom alone as is the case in the outward arc shovels.

Q. In your discussion you referred to the Clutter patent. Did you mean the Clutter patent 1,107,899, Defendant's Exhibit 25? A. No; I was referring to the patent in suit in my discussions up to this time.

This scoop as shown in Exhibit 26 is somewhat similar to the scoop as shown in Fig. 9 of the Clutter patent, No. 1,107,899, however, the main difference being that the latch mechanism of the Clutter patent, 1,107,899, employs a spring for keeping it closed. Of course this Clutter patent which I am now speaking about relates to a skimmer scoop; it is not the type of scoop of the ditcher at all. This scoop and this machine, of course, is incapable of single width cutting, because it has no side teeth.

Mr. Corbett: Your Honor, I think it ought to be clear on the record here that this witness is only testifying from one exhibit, and that when he says there is no spring on that Bernard Clutter device,—Joplin device,—he is going contrary to the testimony, and that is true about the side rake teeth,—the depositions of these witnesses.

The Court: That is a matter of argument.

Mr. Corbett: I want to have it clear on the record, so it won't be confused.

The Court: Well, that clears the record. Anything further.

Q. Are you through with your discussion of that? A. Just a minute. This machine, of course, did not make any advances over the Clutter in the construction of the stick, the connection between the stick and the end of the boom, and the linkage of the Clutter patent; did not provide the long pivot bearing at the end of the boom of the first Downie patent. This matter of distortion of the end wall and the side walls in operation of a scoop of this sort would affect the latch, whether or not a spring is used.

Q. Now, with respect to the form,—what patents do you consider in connection with the first Downie patent, that is, the form of the bucket? A. I don't understand the question.

The Court: You want to get the closest reference?

Q. Yes, the closest reference with respect to the form of the bucket, and also the digging and functioning? A. Well,—you want me to discuss—

The Court: No; which one is the closest reference?

The Witness: Well, the scoop of this Clutter skimmer patent, of course, is one that looks something like the scoop of Downie, but it is not made to act as the Downie patent. That is the scoop which Mr. Ferris picked as the one appearing nearest to the Clutter patent, in appearance,—I mean the first Downie patent, as far as the scoop is concerned.

The Court: Which one did you say that was?

The Witness: I say that some of these skimmer scoops look as much like the Downie patent in outward appearances; of course they are not suitable for use—

The Court: Well, you testified to that. All right.

The Witness: Now I don't feel that any of these scoops in themselves—there is no combination that completely—that will equal or come near to that of the first Downie patent.

Q. Now, discussing the first Downie patent with reference to infringement, in the Osgood structure did you find from your observations spaced bearing brackets, and will you please discuss that? A. The Osgood structure does not have two bearing brackets. It has a wide

bearing between the stick and the end of the boom, which is the same in all functioning and operation and accomplishes the same results as two spaced, widely spaced bearing brackets of the first Downie patent.

Q. With respect to the scoop and the rear of the open end of the placing on the stick. Will you discuss that, please? A. This scoop of the Osgood patent,—I think if I had the chart this would be more readily seen; that is, the defendant's exhibit, their chart No. 101 or 102, I believe.

Mr. Corbett: You mean the chart showing the Osgood structure; is that what you mean you want?

(Chart produced)

A. (continuing) The stick of the Osgood patent is attached to the scoop in rear of the open end of the scoop. It has the front end of the stick as flush with the front end of the scoop, but nevertheless it is even technically, in my opinion, in the rear of the open end of the scoop,—in any interpretation that might be put on that connection.

Q. Referring back to the Mahoney machine, have you any model or method of illustrating what you mean by the term that the bucket would heel over? A. I have a little model here, which is primitive but serves to very well represent the kind of scoop of the Mahoney patent, in the lack of rigid mounting; that is, can be controlled by the numerous power lines,—three power lines. The bottom of the scoop is, of course, heavy, and it is readily seen what will happen when the scoop is lifted up, and as the scoop is pulled along you can readily see what is meant by the non-fixed presentation of this scoop, in that it strikes a slight obstacle and tends to cant and tip, which is totally different from that scoop evolved by the Clutter, which is rigidly mounted during digging operations, and it can be readily seen that in order to properly manipulate the scoop to maintain the bucket in any fixed relationship with the stick it would require very careful co-ordination between the man controlling the line attached to the rear of the scoop and the man controlling the hauling line or the line which raises and lowers the boom.

Mr. Edgerton: We offer in evidence the model the witness has just used, as Plaintiff's Exhibit B-72.

Mr. Mahoney: We object to the use of that thing as a model, because there is nothing to show that it is constructed like the Mahoney device; just a crude looking affair, and we therefore object to it.

The Court: Well, the objection will be overruled.

Q. Referring now to the third Downie patent, and considering first the patent to King, 589,565. Please discuss this patent. A. This patent to King, 589,565, consists of a scoop for an outward arc machine, and it employs bolts w-3 for attaching the scoop and stick in a manner so that by changing the hole in which the bolts U prime are used, the scoop may rock slightly, and the angle of lead of the scoop or the angle of the teeth to the material may be changed. These bolts U' do not eliminate shear in themselves; that is, they are mounted so that they are subjected to shearing stresses, and will not in any way accomplish the results desired in the mounting of the third Downie patent, No. 1,709,466. Of course this stick itself is not connected to any overhead bail or girder across the top of the stick as is the case in the third Downie patent. This King patent does not employ any of the angle clips, such as the clips 27 of the third Downie patent.

Q. Now, in connection with Defendant's Exhibits Nos. 59, 57, 56, and 60, please discuss the mounting of that bucket. The chart here, as I understand it, represents substantially the same illustration as Exhibit No. 59, and you may refer to that chart if you like.

The Court: That is the third Downie, now.

Mr. Edgerton: Yes, Your Honor.

The Witness: This is the Thew shovel. The point in question particularly is the connection between the scoop and the stick. It is an outward arc machine. The scoop is attached to the stick by means of the pin A and the bolts B. The pin A is a shear pin; the bolts B are tension bolts. This connection differs from the connection of the third Downie patent in that it employs a long shear pin wherein there is wear; the holes become enlarged, and play develops, which is harmful in the operation of ditcher machines; the instroke type back hoe; the digging operations on the back hoe machines are more severe as far as their effect on the connection between the scoop and stick is concerned, and the wear which would develop in the pin would be more pronounced even than would be the case on outstroke machines. This connec-

tion also employs several bolts passing through the hole in the part shown as Fig. 4 on Exhibit 59; and there are further bolts connecting the parts marked Fig. 5. These bolts would also be subject to shearing stresses. This scoop, as is indicated on Exhibit 60, is swivel mounted on the arm or stick, so that it is free to turn sideways, that is, it is not fixed from side swing in its mounting.

Q. Are you through with the discussion, Mr. Sessions? A. Yes, sir.

Mr. Edgerton: That is all.

The Court: Cross examination.

Cross Examination by Mr. Corbett.

Q. These various patents which you have discussed, will you state how many of the devices of each patent you have ever seen in operation? A. As far as I know, I have not seen any of them except the devices of the patents in suit, and of the defendant's that I have been discussing.

Q. In talking of the Rood patent 386,438, you stated that it was not capable of digging a single width trench because it did not have side rake teeth; that is correct, is it not?

The Court: He said that of a good many.

The Witness: Yes, I think I said that, as one of the reasons why it was not capable of digging a single width trench. Rood, 386,438, is not mounted in such a way that the clearance would be cut for the pivots connecting the bail, and it would cause serious wearing at this point. The bail would interfere with the sides of the trench.

Q. You have to have side rake teeth to overcome that, is that right? A. The side rake teeth prevent wear on these parts, where it is not desired to have wear.

Q. The question is, will an in-stroke ditcher cut a single width trench if it does not have side rake teeth? A. It might for a while, yes. You would soon run into serious trouble and difficulties.

Q. How soon? A. In the course of operation the pivot bolts are subject to serious wearing.

Q. What pivot bolts? A. The pivot bolts or any projection on the bucket which sticks out.

Q. You do not make the contention that it is necessary to have side rake teeth in order to dig single width trenches with an in-stroke ditcher? A. Yes, sir, I do,

in connection with many types of material through which you are digging. Parts of the scoop itself are totally unsuited for cutting side walls. In soft materials the projecting pieces such as bolts and things extending out causing interference on the side may be sufficient to plough their way through the sides of the trench and make the cut. But otherwise for all classes of work the side teeth are absolutely essential to make an all-around type of machine.

Q. Your position is that if it does not have side rake teeth, it will not be an in-stroke ditcher suitable for all-around work for the digging of single width trenches, is that correct? A. Yes, sir.

Q. I wish you would refer to the Clutter patent, which is the first patent in suit, 1,317,431, and point out anything in the specification which shows that this device has side rake teeth?

The Court: What number, Mr. Corbett?

Mr. Corbett: The first patent in suit, 1,317,431, to Leroy Clutter.

Witness: As far as I can see there is nothing said about any kind of teeth in this patent to Clutter. Teeth are shown on the sides of the scoop in the drawing shown in Figure 1, but they bear no reference numeral, and I don't believe any point was made of that.

The Court: Are there side rake teeth on Figure one?

A. That is difficult for me to say from the figure whether they are side rake teeth or not.

Q. The thickness of each of those teeth is the same as shown in that drawing? A. Yes, sir.

Q. You do not see any teeth on the side of that scoop in that Figure 1, the side which you are facing, is that not correct? A. There is one coming up the side somewhat.

Q. On the side you are facing? A. Yes, sir, there is a tooth above the bottom of the scoop there on the side.

Q. It is the same thickness as the tooth below? A. As shown here it is the same width between the lines.

Q. And if it were turned on edge to be side rake tooth, it would be equal, would it not? A. I don't know what it would be. This tooth might be extended outwardly and form side rake tooth, or not. I cannot tell you from this drawing. As far as I can see, there is no particular point made in this patent as to the teeth.

Q. In spite of the fact that you have made it a point in practically every patent you have discussed here to-

night, the fact that you must have side rake teeth for single width trenches? A. Yes, sir.

Q. In face of that you are unable to point out any reference to such a thing as that in the Leroy Clutter patent, is that right? A. Yes, sir.

Q. You have spoken several times about fixed presentation, have you not? A. Yes, sir.

Q. What do you mean by fixed presentation? A. The bucket is rigidly held on a stick in a manner such that it cannot swing freely to one side or the other, or cannot swing vertically up and down as is the case with a scoop connected with drag lines on the scoop, of the Mahoney patent, that is, freely pivoted to rotate about the pivots which connect the stick to the scoop.

Q. In other words, in your opinion that means a rigid connection of the scoop? A. The term itself does not mean rigid connection. Rigid connection is necessary in order to obtain fixed presentation. Fixed presentation deals with the manner in which the cutting edges are applied to the material being penetrated.

Q. I wish you would refer to Claim 4 of the Leroy Clutter Patent No. 1,317,431, and point out anything in that claim that calls for fixed presentation or rigid connection of the scoop to the stick?

Mr. Richey: Objection to that. He was not asked anything about the claims. It is not his function to interpret claims.

Mr. Corbett: He has talked about fixed presentation. He can read.

The Court: There is nothing in Claim 4 anyway.

Mr. Corbett: All right, Your Honor. That suits me. That is all, Your Honor.

Mr. Richey: That is all.

The Court: You want to offer all of your exhibits. I understood they were all in. You are not objecting to any of the exhibits?

Mr. Corbett: We have not had a chance to go over them, Your Honor.

The Court: They are all admitted, subject to any objection you may have.

Mr. Corbett: Has Mr. Richey closed?

Mr. Richey: We are through. Mr. Downie is to go back on about that other matter.

Mr. Corbett: There are a few points raised here by Mr. Downie for the first time, and by Mr. Sessions, that we would like to rebut briefly.

The Court: Make it very brief. Put on your witness. Limit it strictly to surrebuttal.

Mr. Corbett: We would like to go ahead with them in the morning.

The Court: Put one witness on. I want to get through with this case. I am more interested in the arguments in this case than anything else.

DEFENDANT'S SURREBUTTAL TESTIMONY.

WALTER FERRIS, a witness recalled by Defendants, further testified as follows:

DIRECT EXAMINATION by Mr. Corbett.

Q. You were present during the testimony of Mr. Downie and Mr. Sessions, and heard their testimony regarding the latch structure and structures of the Morrison bucket and the Bucyrus device. Will you briefly comment on any points raised by them, not previously raised?

The Court: That is about as objectionable as the question you objected to that Mr. Richey asked.

Mr. Richey: I object to it. I think it is too general.

The Court: Have you not got any specific things in mind, Mr. Corbett?

Mr. Corbett: Yes, I have a few things; but there are some other things I have not had a chance to talk to this witness about since the notes were made.

Q. I will ask you another question. Did you hear the testimony Mr. Sessions gave, and Mr. Downie also, regarding the wear upon the bolts marked in pencil A on Chart 43, showing the Thew structure? A. I did.

Q. Will you briefly state whether or not their testimony on that point is correct, or any reason why—

Mr. Richey: He fully discussed that in his direct.

Mr. Corbett: I don't think he did.

Mr. Richey: One of your experts did.

Mr. Corbett: I don't think so.

The Court: Let him answer. It will save time. Answer the question.

A. I think their testimony is in error on this particular point.

The Court: That bolt is not in shear?

A. This bolt is not in shear; but it was stated that this bolt would wear and permit—modify the stress on

these two tension bolts so as to put them in shear. This through bolt marked A has a longer engagement with the end casting of the dipper stick than the distance between the other two bolts, and it requires a very excessive amount of wear in this to put any shear strain on the others.

The Court: You do not agree with them as to the character or the extent of the wear?

A. No, sir, I do not.

Q. I hand you Plaintiff's Exhibit No. P-71, and ask you to comment upon the claims made by Mr. Downie and Mr. Sessions with regard to the springing of the bucket and the inoperativeness of the latch in such structure?

The Court: The main contention was it would put the latch out of commission or alignment?

Mr. Corbett: The claim was it would strike on here and the weight on the back of it would press it in.

The Court: What have you to say about that, Mr. Ferris?

A. I would like to distinguish between the term rigid as included in the patent presentation or rigid attachment of the dipper stick and the rigidity or flexibility of the structure itself, in regard to whether it is strong enough to stand the stresses which come upon it. Mr. Downie and Mr. Sessions have discussed this dipper in a way which seems to me to be saying, in effect it will bend if it is not made rigid or strong enough; and that is perfectly true.

The Court: Your contention is to simply make it stronger.

A. Simply make it stronger and make the design right. The patent refers to a rigidly attached dipper stick, it seems to me, in an entirely different sense; whether the dipper has any provision for motion with regard to its attachment to the stick. Every bucket and every mechanism does reflect under the stresses that come upon it. If it is not strong enough, make it stronger.

Q. If the engineer designs it stronger, it may be made stronger?

The Court: You mean it should be like the one-hoss shay?

Witness: Like the one-hoss shay: whether it should fall to pieces all at once or fall to pieces at all.

Q. You were present at the demonstration of the Osgood machine at the Sam Davis Coal Yard? A. Yes, sir.

Q. The one shown by these movies today? A. I was.

Mr. Richey: That was part of his main case. You put that on yourself as your main case.

The Court: Let us see what the question is.

Q. You noticed the breaking of the cable during the final operation of that machine? A. I did.

Q. Will you tell briefly how that occurred? A. After the first measurement of heights of the bucket was made, Mr. Downie asked that the boom be lifted higher and higher, to show the interference of the bridle bars with the lengthwise channel on the face of the dipper stick. Before it got to this final height, the hoisting rope interfered with the cross bracing on the front of the dipper stick and dragged so hard on that, it apparently loosened its attachment to the hoisting drum.

The Court: Nobody has made any point of that.

Q. Was or was not this stick in dumping position when that breakage occurred?

Mr. Richey: There you are again. This is surrebuttal. This is something the first time in the case.

The Court: I don't know that anybody made any point of that.

Mr. Corbett: The point is that there is an attempt to show there would be a co-action between these stops.

Mr. Richey: That is your interpretation. My objection to the question is that here is something brand new in the case. This is surrebuttal. That is highly improper.

The Court: Finish your answer.

Witness: The shovel at that time of that interference was shown in a position for which it was not designed. At no time did the hoisting rope interfere with the operation of the machine.

Cross Examination by Mr. Richey.

Q. Where were you standing when that rope broke? A. I can't say.

Q. You were not operating the machine? A. I was not.

Q. You do not know just when it did break? A. No, sir.

Q. The first thing you saw the rope was hanging there loose? A. Yes, sir; but I saw the rope interfering with the A-frame before it broke, and called Mr. Corbett's attention to the interference, and tried to have the operation stopped.

Mr. Richey: That is all.

Mr. Corbett: That is all. We are not prepared with this other witness. I would rather not put him on. I do not want to put him on tonight.

The Court: All right. Put Mr. Downie on.

REX R. DOWNIE, a witness being recalled by the Plaintiff, further testified as follows:

DIRECT EXAMINATION by Mr. Richey.

Q. You saw that rope after it was broken there at the demonstration? A. Yes, sir.

Q. Which one of the lines broke? A. That was the hauling line which broke, not the hoisting line.

Q. What caused the breaking? A. Evidently the anchorage of the cable gave out. I did not examine the casting or the anchorage to see whether there was any defect; but it was the hauling line that let go, and not the hoisting line.

Q. Where did it let go? A. Right near the end of the rope.

Q. Near the drum? A. Near the drum which is carried at the base of the boom on the Osgood machine.

Q. In other words, if the rope had been long enough to wind around the drum again, it would not have broken, would it? A. That is correct.

Mr. Richey: That is all.

Mr. Corbett: That is all.

The Court: You have one more witness.

Mr. Corbett: Yes. We may not call him.

(Night adjournment.)

(Trial resumed May 13, 1931, 9:30 A. M.)

Mr. Williams: As I understand the situation, Your Honor, there is a question of whether the defendant would put on another witness with respect to the patent phase of this case, and had decided it will not do so. That leaves it open only, then, as to this question of suppression, as I understand it, and plaintiff has Mr. Downie and I think Mr. Siggers and possibly some one else.

The Court: That is the next issue, then. The patent part of the case is closed?

Mr. Richey: Yes.

Mr. Williams: Now, we are faced with this situation, Your Honor. Yesterday we had anticipated that the case would run on during the day before closing, and had made arrangements to have Mr. Fay here, who was the leading counsel for the Byers Company in the Cleveland case, with reference to claims made by the plaintiff that the Byers Company had full information with respect to this Bernard Clutter development, and thought it not of sufficient value to press it. Last night when we found how close we were getting down, we phoned to Mr. Fay and tried to get him here this morning, but he had other arrangements and couldn't be here until three o'clock this afternoon, coming on the 2:45 train which would bring him in the court room about 3:00, and we wanted to have his testimony with respect to his knowledge of this Bernard Clutter situation at or before the Cleveland case was tried.

The Court: Well, we can take care of that, Mr. Williams; we can start the arguments, and when Mr. Fay gets here, stop. How much time do you men want for these arguments? I am inclined to give you nearly everything you want on the arguments.

Mr. Williams: It may run into tomorrow, possibly the night.

The Court: Oh, yes, I should think so.

Mr. Richey: Why, I don't know, Your Honor, how much time it will take. In view of what Mr. Williams says, I have no doubt, if we use what is left from today, and part of tomorrow, we will have plenty of time. I presume, from what Your Honor said about your eyes, that you would like to have us argue the thing rather fully.

The Court: Yes.

Mr. Richey: Save you all the reading that we can, and in that case I think we both want to read a good deal of law, which will take quite a good deal of time. But I don't know—I think an hour and a half to a side ought to be enough.

Mr. Corbett: Your Honor, could you leave that a little elastic?

The Court: Yes, surely.

Mr. Corbett: We certainly can finish by tomorrow night, I believe, unless this testimony of Mr. Downie's is

more prolonged than we expect. Of course, we don't know what he will testify, but we will put it through as rapidly as we can.

Mr. Richey: On this suppression business, too, I think—when I say an hour and a half, I mean the patent end of it, and by the way, I think of course in this suppression we cannot keep out some things relating to patents, because that testimony of Mr. Downie will to a certain extent relate to this Joplin use. We will keep the sheep from the goats as far as we can, but can't altogether separate it.

The Court: Now, I think in the opening, Mr. Corbett has the burden of proof on the first three patents. I think in the opening you might discuss the fourth and fifth patents, and the ones that were not in the Cleveland suit, and then let him answer you on all of the patents, giving you his views on the first three, and then you can answer anything you want to.

Mr. Richey: All right, sir.

The Court: Just so that you know how to proceed. I would like to hear from you first about the third and fourth Downie patents; that is, the fourth and fifth in this suit, and then hear from Mr. Corbett as to why in his judgment the decision of the Court of Appeals should not be followed as to the first three patents in this suit, and let you answer that, and anything else you want to.

Mr. Corbett: That is satisfactory to me.

The Court: All right. Now, the only other testimony in this record about this suppression is the testimony of one witness, isn't it?

Mr. Richey: Mr. Downie and Mr. Siggers, two witnesses, and possibly Mr. Fay.

Mr. Corbett: You mean the testimony of it of record?

The Court: Yes.

Mr. Corbett: Well, there is the testimony of Bernard Clutter and the testimony of Ransom.

The Court: I am talking outside of the depositions now.

Mr. Corbett: I think Hazen is the only one that has testified in open court.

Mr. Williams: Well, some time during the proceeding we shall want to read into the record some excerpts from the brief of the Keystone Company in the Circuit Court of Appeals, but that will be very brief. These are the only witnesses that I know of, Mr. Downie and Mr. Hazen and Mr. Fay.

The Court: All right.

Mr. Richey: What are those sections you want to read in?

Mr. Williams: I can't tell you just where it is, but it is with reference to claims in statements of the brief, in general, that no one had ever used this rigidly attached scoop on an instroke ditcher.

Mr. Corbett: That no one ever conceived—the statement contained in the brief in a couple of places is that no one ever conceived the idea of using a drop bottom bucket on an instroke ditcher, no mechanic—that is the substance of it.

Mr. Richey: Can you give me the page number?

The Court: Well, that is in this patent suit?

Mr. Williams: No, that is in the brief in the Circuit Court of Appeals in the Cleveland case.

The Court: You are offering that on the suppression issue?

Mr. Williams: Yes, on the suppression.

Rex R. Downie, a witness recalled by plaintiffs for further examination, testified as follows:

Direct Examination by Mr. May.

I began work on Downie Patent No. 1, in the summer of 1920. I had taken up with Mr. Siggers the advisability of applying for a patent. That was Mr. E. G. Siggers of Washington, D. C., our company's patent attorney. I remember when I took this matter up with Mr. Siggers, the development of the drop bottom ditcher was reported to him in December, 1920, and at that time he was advised that we would desire to apply for patent, and would presently supply him the data for the preparation of the application. I supplied him the data for this application in February, 1921. When I took this matter up with Mr. Siggers I had no knowledge or information concerning any device or construction used at Joplin, Missouri. Knowledge of the Joplin device came to my knowledge in January, 1921, from Mr. Lyle Hazen. The information I received from Mr. Hazen was that on a job of Mr. Herbert Wallower, a contractor and a user of one or more Keystone excavators, Mr. Bern Clutter, the operator, and Mr. Hazen, our superintendent at Joplin, and Mr. Wallower, had between the three of them, or among the three of them, contrived a drop bottom scoop, which was a special scoop made after the general pattern of a

skimmer and mounted upon a Clutter ditcher, and that it had been used to some extent in digging a cellar at Carthage, and that they were using it for loading wagons, that they couldn't keep the bottom closed as to its operation—

Mr. Corbett: That is hearsay, as to whether or not they could keep the bottom closed.

The Court: Well, he is testifying now as to what he heard.

Mr. Corbett: Yes, but he is touching on the patent situation as to whether or not they could keep it closed.

Mr. May: Well, he is charged with suppressing certain facts, and it may be material what facts he had in his mind and he knew of.

The Court: Well, this amounts to a fraud issue.

Mr. Corbett: If he wanted to prove that they couldn't keep the bottom closed, he should have brought that man Hazen here to show it.

The Court: Well, he is not testifying that that is the fact. He is testifying to what he heard, that is all. It would not be considered on the other issue at all.

Mr. May: That is all. It is not asked for that purpose at all, or offered.

(Narrative continued.) He said that there was difficulty in releasing the latch of the scoop; that the latch was changed several times. Mr. Hazen was not definite as to what the latch changes or construction consisted of. He said that to close the scoop Mr. Clutter lowered the scoop to the ground and rested it upon the bottom; that in one form of the latch releasing structure the tag man, or latch man, stood out either on the brow of the bank beyond the bucket or down in the pit, and released the scoop. That is in summary the points that I remember of Hazen's information. His information was that this device had been used two or three years previously to the date he was talking to me. That would place it then, in 1918 or 1919, and, as I say, at Carthage, Missouri. As to what was done with these changed skimmer scoops at the conclusion of this job, he said they were taken off and used as skimmers, and that the use of machines as ditchers was discontinued. The information that was obtained from Mr. Hazen or the summary of this information, principally what the machine had consisted of, as I understood it from Mr. Hazen, and the fact that it had been used for some digging and loading of wagons, the method of closure and the fact of variations having been

made in the latch construction, I believe I reported. I think that is all of the matter that I reported to Mr. Siggers. This information was communicated to Mr. Siggers before I applied for a patent, and by way of informing Mr. Siggers, so that he could rightly advise me whether to apply for patent, and so that he might draw the patent accordingly. Mr. Siggers advised me concerning this matter in legal parlance that it was an abandoned experiment, and that we should proceed with applications for a patent. I so proceeded and executed the application as he drew it and presented it.

The Court: Now, what was the date of this contract?

Mr. May: Which contract?

The Court: What was the date of the contract with Bern Clutter?

Mr. May: April 11, 1925, perhaps not the 11th, but in April, 1925.

The Court: April, 1925, was the date of the contract?

Mr. May: But there has been a charge here that there was fraud right from the inception.

The Court: Well, I am just trying to correlate these dates. Will you let me have that exhibit, the agreement?

Mr. Williams: That is Exhibit No. 19.

Mr. May: No, it is 114.

Mr. Mahoney: Well, that is a copy of it. It is in twice.

Mr. May: The same thing is in each, however. The words are exactly alike in each.

Mr. Williams: One is a carbon copy of the other.

The Court: All right, proceed, Mr. May.

(Narrative continued.) This application was granted and the patent issued in 1925, No. 1,511,114, under date of October 7, 1924. The date I referred to above as 1925 should have been 1924. After this patent was granted we found that it was being infringed by the Byers Machine Company. First of all, we took up with Mr. E. G. Siggers the matter of the infringement and the question of proceeding against the infringers; the principal question was not really as to whether there was infringement but as to the matter of getting under way with suits.

Mr. Siggers advised us to investigate the condition of our own patent. He reviewed a number of patents, and desired us to investigate, among others, the matter

of the Joplin experiment, and principally for the purpose of recording the facts of it against a possible misunderstanding, subsequent misunderstanding, of those facts.

Q. Had you in the meantime, that is, between the time of your conference with Hazen and this period that you consulted with Mr. Siggers, learned that some of the information given to you by Hazen was not accurate? A. Yes, sir. In the period from early 1921 to 1924, about mid-year, I had learned that this work occurred, not at Carthage, but at Joplin, and not in 1918, but in the winter of 1919 and 1920, and I advised Mr. Siggers of that, either as I learned it, or in the latter part of 1924.

Q. Did you pursuant to Mr. Siggers' suggestion undertake to ascertain more definitely what had happened at Joplin? A. Yes, sir. I investigated about Mr. Wallower and Mr. Clutter, and, as I say, had talked more or less currently with our employees who came to Beaver Falls from the Joplin plant at sales conferences and such occasions, and including Mr. Hazen and Mr. Oliver, and there may have been others.

Q. Did you or did you not have any of these witnesses put their recollection into written form? A. Yes, sir. I asked Mr. Clutter and Mr. Wallower as being the principals in that work at Joplin to record the machine they had used and the results of their work.

The Court: How long was that before this agreement?

The Witness: You refer to the agreement of 1925, Your Honor?

The Court: Yes; Exhibit 98.

The Witness: About the same time. Mr. Wallower's affidavit was given to me shortly after Mr. Clutter's. I interviewed Mr. Clutter personally in the matter, and had another employee interview Mr. Wallower, who was then located in the West.

Mr. May: Mr. Williams suggests that we exhibit a photostatic copy to the witness, as the exhibit cannot now be found.

Q. I show you Exhibit 113, I believe, of the defendant. Will you state whether or not that is the written statement obtained from Mr. Clutter, to which you referred in your answer just previous? A. Yes, sir, that is the affidavit made by Mr. Clutter at the date there shown.

Q. And what is the date there shown? A. April 16, 1925.

Q. Do you recall, Mr. Downie, when with reference to this date, April 16, 1925, the statement or affidavit of Mr. Wallower is dated? A. Mr. Wallower's statement was a little later than Mr. Clutter's.

Q. Did you refresh your memory from his statement? A. I have here Mr. Wallower's affidavit, and its date is May 8, 1925.

Mr. Williams: May I see it, if you please?

Mr. May: Yes, let Mr. Williams see it.

(Paper handed to Mr. Williams.)

Q. I show you a paper marked "Exhibit P-73" and ask you what that is? A. This is the statement by Mr. Wallower dated May 8, 1925, his statement in regard to the Joplin work.

Mr. May: If the court please, we offer Exhibit P-73 in evidence.

The Court: Any objection?

Mr. Williams: To the introduction, no, no objection.

The Court: It may be admitted.

Q. Will you briefly state to the court the contents of that affidavit, without reading it in full, and consuming that amount of time?

Mr. Corbett: What is that—the substance of it? It is a short affidavit.

Q. Well, read the affidavit.

The Court: I will read it.

(Exhibit handed to court.)

(Narrative continued.) After obtaining the information through these affidavits I furnished this information immediately or in due course after that to Mr. E. G. Siggers, since that had been the purpose for which we had obtained the information. This information was submitted to him by giving him the affidavits themselves, that is the two affidavits of B. R. Clutter and H. H. Wallower. Later on I had further conferences with E. G. Siggers on the question of infringement, that is in 1925, I had, I believe, at least two conferences with E. G. Siggers. One or two of them were before the obtaining of the affidavits, and one or two afterwards. Mr. Siggers' conclusion after this information was submitted to

him was confirmatory of his earlier advice, that the Joplin work was an abandoned experiment, and that our position was therefore sound, and that we should proceed with litigation. We then proceeded upon the advice of Mr. Siggers, Senior, who was somewhat advanced in years, to go to Mr. Janney, of the firm of Emory, Booth, Janney and Varney, of Chicago. By we I mean the Keystone Driller Company. We carried with us all the information that we had accumulated up to that time. That is, Mr. Siggers' information and views as to the prior art, the patent, the field machines as distinct from patent machines, and including this Joplin machine, and submitted all of the same to Mr. Janney. That was some time in the summer of 1925.

These affidavits were in the material that was submitted to Mr. Janney. I had at least two conferences with Mr. Janney in Chicago, possibly three. Mr. Janney took up the investigation of the paper art, and considered the reports as to the field art, and prepared toward entering suit against the Byers Company. However, we did not—as I think we filed the bill against the Byers Company while Mr. Janney was still in charge of the case. However, it leads up to the time of our changing counsel in the Byers suit. His conclusion—and you referred to that—on the Joplin business was that that was an abandoned experiment; he confirmed Mr. Siggers' opinion in regard to it and our course and general plan was not changed.

There was a discussion in Mr. Janney's office as to whether these facts, as we had gathered them, about this Joplin incident were such that they should be brought to the attention of the court, and at the first conference with Mr. Janney about what we had then gathered about the Mahoney machine or anything else should be presented as a matter by the Plaintiff. This was questioned and discussed. My attitude as expressed to Mr. Janney at that time was that I would be governed by counsel in the matter. In behalf of the company I desired of Mr. Janney that we should follow whatever practice was the conservative and best legal practice in the matter. At this time there was a change of counsel.

Mr. E. G. Siggers died—I am not certain as to the date—but in the course of the preparation of this case and the investigation of it, and I should have said earlier, Mr. Philip Siggers, son of E. G. Siggers, was in the employ of the firm of Emory, Booth, Janney & Varney.

And upon the decease of Mr. Siggers, Sr., Mr. P. E. Siggers, or Philip Siggers, withdrew from that firm and took up his father's practice at Washington. And since our case had come into the Janney office by way of the Siggers' office, we retained Mr. Siggers as our counsel in charge, and Mr. Janney being pressed with other work, we concluded to arrange for further senior counsel in the case. Mr. Janney had worked with Mr. Richey, of Richey & Watts, in Cleveland, on earlier cases, and told us of Mr. Richey, and Mr. Siggers and I went to Cleveland and arranged with Mr. Richey to take charge of the case as senior counsel.

I do not recall exactly when this took place, but I would place it early in 1927 or late in 1926. Between the date of the conference with Mr. Janney and the time of taking the case and putting it into Mr. Richey's hands we did not gather any more information, relative to this Joplin incident, of an essential character; it was mostly confirmatory of what we had heard, except that I did learn this from Mr. Oliver—I learned some additional facts as to the discharging of the scoop and the method of discharge from Mr. Oliver, either in 1925 or 1926.

You state that you are calling my attention to the matter with Lyle Hazen at our plant. Well, as part of the investigation of what went on out there, we asked Mr.—— one of our employees to try to find one of these old scoops, special buckets that had been installed by Mr. Wallower, and an old scoop was secured out West and sent in to the plant, and we asked Mr. Lyle Hazen, on one of his trips to the shop, to recondition and reconstruct the scoop or fragments of scoops—I believe there was only the shell of this special scoop came in, possibly with the skimmer trappings, and to set it up so we could see whether there was anything in it that we could use—anything that would be of advantage commercially. That was at the Beaver Falls plant, and that was, not before our first conference with Mr. Janney, but I believe was before, however, our first conference with Mr. Richey.

The scoop reconditioned in the way that Mr. Hazen had built it from his recollection at the time did not differ in any particular from the description of the scoop as had been gathered through these affidavits. The general construction, that is as to it having been mounted on a Clutter ditcher, was the same. Mr. Hazen fixed up a latch in the construction which was in part to follow in general the Joplin construction, or one of the Joplin

forms and also to improve it in any way that he could for the purpose of our improvement of our design. The one that I speak of was sent in by Mr. Ransom, who was commissioned to attend to the matter, as being one of the special scoops used there at Joplin. I do not have any definite knowledge of my own as to whether it was or not. Mr. Hazen in his deposition here said that he never again saw either of those special scoops used at Joplin, after their use at Joplin, and he attended in our shop at Beaver Falls to a reconstruction here, and it is to be inferred that he now believes that that was not one of those special scoops.

Now, when we took this matter up anew with Mr. Richey and his firm we laid before Mr. Richey everything we had touching the whole matter at his earliest convenience, which was shortly after his taking up the case. Among this matter were these two affidavits. In fact, I should say, before it was—before Mr. Richey took up the case, all of the material was before him. He had not read all of the old patent art on it, of course.

Mr. Richey's opinion was confirmatory of Mr. Siggers', Sr., Mr. Janney, and Mr. Siggers, Jr., that the Joplin work was an abandoned experiment, and that it did not anticipate—or their construction there, to the best of our knowledge, did not anticipate the construction of the patent in any case, and that we should proceed.

Mr. Richey: I think it would clear matters up a little bit to call attention to the fact that the bill of complaint in the Byers case was filed January 31, 1926. Our firm were local solicitors; we had nothing to do with the burden of the case. Later, as Mr. Downie says, we were called in to take the burden of the case.

The Court: You say that was filed January 31, 1926?

Mr. May: That is the Byers case they are talking about.

The Court: Is that right, Mr. Richey?

Mr. Richey: Well, wait a minute—I beg your pardon. It was the 22nd day of December, 1926, that the bill was filed.

The Court: 22nd day of December, 1926?

Mr. Richey: Yes, sir. The bill in this case was filed about March, 1929, I think. I don't know the exact date. It was after Judge Jones' decision. That was handed down, Your Honor, about the 1st of February, 1929.

Mr. Williams: February 9, 1929, the bill was filed in this case.

The Court: What is it?

Mr. Williams: February 9, 1929, the bill in this case was filed—in the Osgood case.

In our conferences and in planning for the taking of testimony in the Byers case there was a discussion as to whether the material gathered with reference to this Joplin case was of such nature that the plaintiff should offer it to the court as part of its case, and the question originally discussed with Mr. Janney was again raised. Our attitude as the client and principal in the matter was the same, and we so advised Mr. Richey.

Q. Mr. Downie, coming to the meeting with Bernard R. Clutter leading up to the affidavit and the agreement which is in the case as Exhibits 113 and 98—

The Court: 98 is the agreement.

Q. —how did you arrange to meet Mr. Clutter? A. I don't know that I arranged to meet him. I went to visit him—I may have telephoned, or Mr. Elmire may have telephoned for me. I got Mr. Elmire of our New York office to take me to Mr. Clutter's place.

Q. And where did Mr. Elmire take you to find Mr. Clutter? A. Well, it was either to his job or to his residence—I do not remember exactly. He lives at Lakewood, New Jersey, or did then, and it was in New Jersey.

Q. Did you meet B. R. Clutter at one time, or more than one, in connection with the obtaining of this affidavit? A. I met Mr. Clutter two or three times in the matter of the affidavit here.

Q. Now, will you tell the court, without me asking too many questions, just what happened in those several conferences; what was said and done between you and him and what happened? A. Following Mr. Siggers, Sr.'s opinion and instance that we should investigate the Joplin work, I visited Mr. Clutter, I think at Lakewood on the first occasion, either in the latter part of 1924 or early in 1925, and asked him about the work he had done at Joplin, and he told me of the construction there, and I also desired at the same time, as a measure toward solidifying our position, to acquire whatever there might be in the way of rights growing out of the Joplin experiment or use, whichever it might prove to be, and desiring an affidavit also as to the facts, and being acquainted with Mr. Clutter's characteristics, for he is of the type which is known as somewhat shifty, which also I had

advised Mr. Siggers, and which had prompted his advising that we secure an affidavit—I offered to Mr. Clutter, or he needed money and stated plainly that he would require money if an affidavit and his story were to be reduced to writing, that if he would agree to convey any rights he had in or arising from the Joplin work, and would execute an affidavit presenting his then understanding and recollection of the Joplin work, reasons for discontinuing it or not following it further, that I would, in behalf of the company, convey to him a one-fourth interest in a machine that he was then proposing to purchase, and that as to his rights, for I understood at that time that he had an application in the Patent Office presumably on some detail or element of the scoop he had used at Joplin—and whether I arrived at that because of his referring to his contrivance as his patent, as you know workmen some times do, or whether he simply planted the idea that he had an application in my mind, I do not know, but in any case I had that belief, and I did not want to pay anything for that unless it could be of use to us, and I felt that there was a possibility that Mr. Clutter might have some detail or construction, and even though it was only a patent construction, might be of use in combination with our other patents. So I concluded that it would be advisable to wrap it in with our general patent property and case. And so made the offer to Mr. Clutter that in the event we were successful in retaining or recovering our own business in the ditcher, whether by reason exclusively of patents that we then had, or whether by reason of any patent right that we might acquire from him, that we would pay him an additional, or credit him an additional one-fourth interest in the machine he was about to buy, thus making the second half contingent upon our own satisfactory progress toward the recovery of our ditcher business. As the memorandum, I believe, shows, I placed a time limit on that by way of definiteness, and to prevent its continuing too great a length of time. Of course, at that time I thought that the matter would be concluded amply or easily within two years' time, and I think I placed a limit of two years on this contingent payment, and reduced all of this to the form of a memorandum, intending to execute it with Mr. Clutter, after one of my visits; and in the interim, I had another conference—that would be early in 1925—with Mr. Siggers, or at least communicated with him, whether by phone or conference, and then

returned to see Mr. Clutter, some time along in April, 1925. I found that Mr. Clutter at this time—for I asked him pointedly—and because convinced that he had no patent application in the office, and nothing which in my further talk about the matter with Mr. Siggers could be regarded as of value to our case. However, since I had made the deal thus and so with Mr. Clutter, one of the elements being that he convey whatever he had to us, knowing that I was buying an uncertain quantity in a sense, or at least not on full information as one element, and was compensating Mr. Clutter for reducing his story to writing and fixing it for us against his own future misrecollection or change of belief, whether interested or disinterested, I told him I would go forward as I had arranged in the previous conference, and that we would pay him according to the memorandum if we succeeded in our plan of re-establishing our own trade, since he had signed the affidavit and that was part of the deal as a whole. I had not distinguished in compensation between the signing of the affidavit as compensation for one quarter, and the conveyance of right as the compensation or consideration for the other quarter interest; the two were wrapped together; it was all one transaction. Now, the legal case was not settled; the delays carried the matter far beyond the two-year period set up in the memorandum. Mr. Clutter was impecunious and hard pressed for cash, and we had some friendly—

Q. Just before you go into those negotiations—at the time that this affidavit was signed, and the agreement not signed, do you have a recollection as to what was done with the copies of the agreement that you have with you? A. The copies of the agreement?

Q. The memorandum, or agreement, as you call it? A. I do not know that I recall of my own recollection that Mr. Elmire had one copy of this—had Mr. Clutter's copy. I heard Mr. Elmire state that he did, and Mr. Clutter said that he had no copy. Refreshed from that, I can remember it, but I don't think I would remember it myself.

Q. Now, you can proceed and tell what transpired between you and Mr. Clutter following the signing of this affidavit. Was or was not a contract of sale entered into for the machine which you mentioned he was proposing to buy? A. Yes, sir. The machine referred to here when I say a quarter interest and another quarter interest, was one bought by Mr. Clutter on deferred payment plan early in 1925.

Q. Just one minute. I want you to identify this Exhibit 96. I show you Exhibit 96, and ask you to state whether or not that is the contract for the purchase of the excavator? A. Yes, this is the contract on the first of the two 425 Clutter machines bought in that year, shop No. 4918.

Q. You speak of two machines. Which one was it to which you referred in your recent testimony? A. I have been referring all along to the first of the two machines bought by Mr. Clutter in that year.

Q. The second was a later transaction? A. Later transaction.

Q. Than this incident of the affidavit and memo? A. Yes. It followed this and had nothing to do with it, and is not involved in any way with it.

Q. And in connection with the contract were other papers executed by Mr. Clutter? I show you Exhibit No. 101 and ask you what that is? A. This is evidently the security on the machine sold to Mr. Clutter. I do not find the identification that would show that it was this first machine rather than the second. Possibly it is here. They were about the same price, and I don't carry the prices in mind. Just a minute—this is the chattel mortgage or security on the machine to which I have referred, Shop No. 4918.

The Court: That is the first machine?

The Witness: That is the first machine.

Q. That is commonly called a chattel mortgage? A. Chattel mortgage on the machine, yes, sir.

Q. And were there any other papers signed accompanying that mortgage? A. I do not know that there was. Oh, yes,—there were the notes securing the payment, which are listed here in the mortgage.

Q. How many of those? A. Eighteen promissory notes, one for $515.00, and seventeen for $425.00 each.

Q. Now, Mr. Downie, proceed and tell what transpired between you and Mr. Clutter following those interviews, referring to this machine and referring to the interview itself? A. As I say, Mr. Clutter needed money badly, and pressed his need of it to me as representing the company, and pressed as a claim his rights under the agreement I had made with him. We were friendly with Mr. Clutter; I had worked with him in the field, helped him when he was demonstrating, I fired the boiler for him and pulled the tag line, and he taught me to operate it, and he was of a genial and affable and friendly type,

such that it was difficult to hear of his need of funds without doing the best we could for him, and I pointed out that we didn't owe him anything, even though he needed money, because the—it is along about the time that the two-year term mentioned in the memorandum expired—but in the hope that something would happen in our case so that we could reasonably and properly make a payment to Mr. Clutter, I extended the time for him. However, in the meantime a complication arose, and it was not contemplated at that time of making the agreement, and which led to difficulty with Mr. Clutter. He began to fall down badly in his payments, and on one or two occasions he sent us bad checks.

Q. What payments do you refer to? A. Payments on this machine.

Q. According to the mortgage? A. Not that mortgage, but on a machine bought a little later in the year. We had furnished him two machines, worth seven or eight thousand dollars apiece, and he was working them pretty steadily, and was not paying us as fast as he was taking value out of the machines, and we had to look at the case in the course of regular business as to whether or not the Clutter account would have to be braced up, and told Mr. Clutter this, that he was falling down so badly that even though he, having been an earlier demonstrator of ours, and was in some sense, if not a protege, at least a friendly customer, that we might have to take his machine back; even though, as I say, a one-fourth interest had been credited to him, the value had fallen still further so that that quarter interest with what money he had paid still did not make our equity safe in the machine.

Q. Do you recall how many of the notes he had paid? A. I do not recall. I think two or three, but it would only be a guess.

Q. Do you know what that sheet is? A. Yes, sir, this is evidently a sheet from our notes receivable ledger on the account of B. R. Clutter.

Q. Can you tell from that what notes had been paid? A. Yes, I believe I could state from that what Mr. Clutter's credits were.

Mr. Williams: I have never seen this.

Mr. May: Yes, you did. It was in the bunch of papers left with the clerk.

Mr. Williams: It is quite evident that this witness cannot identify these matters, but I am willing to let it go in.

The Court: All right.

Q. From that, can you tell how many of the seventeen notes Mr. Clutter paid, and when they were paid? A. There were three paid. One June 26, 1925, one March 19, 1926, and one April 22, 1926.

Q. Can you tell from that when the credit of the one-fourth was made? A. Yes, sir. Here is a credit that would be the first quarter credit to Clutter December 21, 1926, $1700.

The Court: Did you credit the first of this quarter —did that cover the first payment on the machine or later payments?

The Witness: That was intended to cover the first quarter.

Q. Spoken of in that memo? A. Yes, sir.

Q. First quarter allowance spoken of in that memo. A. Now, it was delayed, due to Mr. Smith, our credit man and treasurer, mislaying my memorandum in regard to the matter, and that accounts for the fact that it was not until December, 1926, even though I had arranged it in April, 1925, that that credit was made to Clutter.

The Court: You mean you had made a credit memorandum to Clutter when you got back from Lakewood, N. J.?

The Witness: Yes, sir, immediately, and thought that it had been issued, and that Mr. Clutter's account would be thus reduced by that quarter. Mr. Smith later found my handwritten and initialed memorandum of that, but had neglected to properly credit it to Mr. Clutter's account.

The Court: That credit was made in December, 1926; is that right?

The Witness: It was entered on the books December, 1926.

Mr. Williams: It was entered as at the close of the year, December 31, 1926.

The Court: December 31, in what amount?

Mr. Williams: $1700.

Q. Is that transaction, or rather that incident, the memo agreement, the matter referred to in the deposition of F. W. Ransom? Do you recall the deposition? A. I don't recall the deposition.

(Recess.)

Q. I will read you from Mr. Ransom's deposition. Question 19. (Reads.) "Do you remember at any time

Mr. Clutter questioning or disputing the amounts which you claimed were due on these machines for any reason?" That question was objected to by Mr. Edgerton. "A. Mr. Clutter never questioned our account except that he claimed he had a credit due him which he did not have on our books, and repeatedly stated that Rex Downie knew about this credit that should be given him on his account. Q20. Did he explain to you in any way the nature of the credit that was due him? A. He did not. Q21. He just kept telling you to ask Rex Downie about it? A. Yes. Q22. Did you subsequently take up with Mr. Rex Downie the matter of these credits claimed by Bernard R. Clutter on the two excavators you understand he had purchased from the Keystone Driller Company about which you have been testifying? A. Yes. Q23. Will you kindly relate where and when you took the matter up with Mr. Rex Downie, and state as nearly as you can just exactly what took place? A. In the early part of December of 1920 I had occasion to go to Beaver Falls in connection with an agency to be established in Cuba for the account of sales of Keystone excavators, and at the same time to go over with the treasurer, Mr. Smith, a number of accounts in New York territory, among these the account of Bernard R. Clutter. I stated to Mr. Smith Clutter's reason for withholding payments on his account, and asked him if he knew anything about the credit claimed by Clutter, stating that Clutter always claimed that Rex Downie could clear up the matter. We then called in Mr. Rex Downie on this account. Mr. Downie seemed surprised that no credit had been allowed, and said that he had given Mr. Smith a memorandum on the matter. Mr. Smith then found a memorandum which called for a credit, I believe, of $1,000, and said that he had not made the credit on the books because he understood the credit was not to be made until a suit then pending was decided. Mr. Downie said, no, that one-half of the credit, I believe $500.00, was to be made immediately, and the balance was to be allowed in case of a favorable decision on this case. It was then decided that the credit was to be made for the one-half of the amount, that I was to so notify Clutter, and insist on payments of his account. I am not sure how this credit was entered on the books, but believe it was through my original entry, credit memorandum back through the New York office. This would be early in December, 1926. Q24. Did Mr. Smith or Mr. Downie explain to you at that time

just why Clutter was being given this credit? A. No, sir. Q25. Can you state what suit it was that was pending that this credit referred to? A. Neither Mr. Downie nor Mr. Smith mentioned the name of the suit, but as the only important suit the Keystone Driller Company had pending at the time was the one against the Byers Shovel people at Ravenna, Ohio, for infringement, I presume that was intended."

The Court: Who is testifying there?

Mr. May: F. W. Ransom.

The Court: Who is he?

Mr. May: He was at one time secretary and treasurer of the Keystone Driller Co., and at this time I believe he was in the employ of the Star Driller Co.

The Witness: No, in our New York office as collector and export manager.

Mr. May: I mean at the time the deposition was taken.

Mr. Williams: No, the deposition shows he was not employed then.

Q. Now, Mr. Downie, is the credit memorandum, or rather the credit to which you referred a few minutes ago, the same credit as referred to by Mr. Ransom in his deposition? A. Yes, sir, that refers to the same incident, except the amounts are wrong, as Mr. Ransom remembers them.

Q. Now, Mr. Downie, going back to the transaction between yourself and Mr. Bernard R. Clutter, will you proceed to relate what took place regarding the arrearages on this machine and the agreement or memorandum of which you have been talking? A. The credit was duly issued, as shown by the ledger there, but still Mr. Clutter's account on the first machine was in arrears, and at a visit some time in the forepart of 1927, I told Mr. Clutter that he would have to make the payments or we would have to take his machine back, and I had made this visit along with an inspection trip down the New Jersey coast, looking at other machines, and, among other things, had some difficulty in the swing mechanism of one of the Clutter machines, and after attending to that, told him about his credit condition with us, that he was endangering it. And later on we had to do just that thing. Of course, I believe I gave Clutter a month or two months, something like that—I don't remember the exact length of time—in which to repair his account with us, and he did not do so, and I wrote or told, I am not sure

whether it was on a trip or by writing, the New York office to proceed to repossess Clutter's machine. Clutter remonstrated against this, on both the personal ground of friendship and on a pretended, as I am very sure, misunderstanding of the transaction I had made with him in the early part of 1926. There began to be apparent in Mr. Clutter's attitude the idea that it would be to our interest to repossess his machines. There was more than a little of threat finally apparent when our New York office advised him that they had been ordered unequivocally to proceed, and it could amount to nothing more nor less in my own layman's understanding of the term of blackmail, even though Mr. Clutter was friendly; it was just that he seemed to believe that by my transaction with him in 1925 I was making some effort to enlist his good graces, and that the deferred payment was for that purpose, to keep him hushed. Now, I told him in 1927 that for all of me or of us he could put anything and everything he knew in as many newspapers as he liked; that his notions were unfounded, and that we meant business, that we were repossessing his machine unless he cleared his account up and were proceeding to take his one machine, and hoped in his behalf that he would pull out on his subcontract work that he was doing for a man, I believe, by the name of Straub or Staub, or some such; but he didn't pull out or amend, and I happened to have learned of a couple or three White trucks that Bern had bought back along in 1925; he was arranging his licenses there for his new White trucks at the same notary's office, and getting his license at the same place that he executed the affidavit that I had presented him as to his story about Joplin work, and I noticed that he still had his White truck, and knowing something of the way truck companies required payment, I was suspicious that Clutter was holding out on us and keeping his truck. I don't know that I definitely and pointedly called Mr. Clutter's attention to it but—

The Court: What do you mean by that—holding out on what, the White truck?

The Witness: I mean that I felt that Clutter was probably making his payments on his trucks.

The Court: Rather than to you?

The Witness: Rather than to us, and that our machine was the center of his contracting business, and therefore that he ought not to do that. He ought to equitably retire his equipment. However, I mention that

merely as one of the things that I had in mind that rather convinced me that Clutter was over-reaching, or over-relying on the idea that he had us in fear in some degree of his knowledge in regard to the Joplin work. This merely sharpened our determination to repossess his machine, and we repossessed then the second one, but nevertheless told Mr. Clutter that we would fulfill the agreement I had made with him if and when, as anything fell due to him, purely and simply as a matter of keeping our word. And even after his machines were repossessed, Mr. Clutter needed money badly, and the letters—I believe they are here in evidence—show the pressure and the insistence—you can in a way call it friendly, and in a way you can call it unfriendly—for cash, and Mr. Clutter did not seem either able to understand or to make reasonable and ordinary accounting of the one time extension that I had made him more or less simply from our friendly interest in him, and so I offered him, in lieu of his contingent rights under my original deal, and made a substituted transaction, that is, at the time of taking back the machines, I had said, well, now, since your contingent credit cannot now be applied against merchandise, and would have to be remitted in cash by us in the event of its falling due, I propose that in order to preserve some interest in the thing to you we substitute one-half of the amount that would otherwise have been due, originally, I believe, $1900, or some such, down to one-fourth of the merchandise credit, although a number of scoops had been rejected by Clutter, so that it don't really amount to quite that. Hence the actual $1700 credit issued. Mr. Clutter was agreeable to that, and I had on the strength of that then extended the time, I think, a year perhaps, or year and a half, and that time elapsed, or was three-fourths elapsed, and Mr. Clutter still extremely insistent that he needed some money. Well, to be shut of it, and to clear the case up, I told Bern that if he wanted to just liquidate the claim under my original deal with him for the purchase of whatever he might have in the Patent Office rights, that I would do it, and we would simply remit to him one-half of what we were to have remitted in cash in the event of his claim being realizable and discounting the possibilities of it. In other words, we would discount the possibilities of the suit as one chance in two, and that we would call it then one-half, or $900.00. I believe it is, which would be $450.00 or $425.00, something like that, and that if he had to have

cash at once, that would be all right with us, and we enclosed our check, and if he wanted to substitute that and be shut of the whole business, finally accept the check; if he didn't, please return the check. He cashed the check, and on that the matter was closed. Then some time later Clutter wrote back again—

The Court: Do you remember the date of the check?

The Witness: I do not. It is here, however, in evidence somewhere.

Mr. Mahoney: Exhibit 108. The date of it is February 16, 1928.

The Witness: What is the amount, please?

Mr. Mahoney: $476.00.

The Witness: That is the check to which I have just referred.

Mr. Mahoney: This passed through the Clearing House in Cleveland on February 21, 1919—I don't know whether Your Honor wants that or not.

Mr. May: It went through the usual course, and probably was cashed some time later.

The Witness: (Continuing.) We knew then Mr. Clutter did not, and I feel just would not, understand the course that the thing had taken. He referred to our deal, and that we had been shortchanging him, and cutting his payments in two too often. He was greatly abused over the matter, and there was nothing to do under the circumstances but simply point out the facts, as I knew them, and that is what I did by letter, and I think those letters are here in the case, that there had been a time set during which he could have a right, that that time had elapsed without his right materializing, and in the hope even that something might materialize for him, I had extended it and finally discounting it, paying in cash, to be done with it. That summarizes the transaction with Mr. Clutter.

Q. Look at Exhibits 104 to 107, both inclusive, 109, 38—

The Court: 138.

Mr. May: No, just 38—

Q. —110, 39, 111 and 40, and state whether or not those are the letters back and forth between you and Clutter, to which you referred in your testimony just recited? A. Yes, sir, these are from the correspondence, and are letters covering this matter I have spoken of.

Q. Look at the letter of December 4, 1928, which is Defendants' Exhibit 39 and see if from that you can re-

fresh your recollection as to the final extension date of that agreement of which you are talking? A. The letter of December 4?

Q. Yes, No. 39, December 4, 1928?

Mr. Williams: What is the question?

Mr. May: If he can fix the final extension date of that agreement.

Question read.

A. Yes, sir. The letter extends or refers to the time having been extended to the end of 1928,—the effect of the original transaction; and "but in the offer to so extend the time we also required the substitution of $952 as the amount of the contingent credit, instead of the original $1904, representing the second or contingent quarter of the price of the machine."

Looking at the bills receivable sheet of the Bernard R. Clutter account, can you tell how this account was closed out, as referring to this first machine, the one referred to in the memo of April 11, 1925?

Q. There is a credit of $4,250, closing the account August 11, 1927.

Q. Now I show you another sheet and ask you what that is?

Mr. Williams: That is at the time the first machine was repossessed?

Witness: That is when the closing credit was made in the bills receivable ledger. I cannot say from that, though, whether that is the date of repossession.

Mr. May: I think he can, probably, from this.

Q. What is that sheet? A. A journal sheet for the month of August, 1927, from our general books.

Mr. May: We hereby offer in evidence Bills Receivable Account of B. R. Clutter as Plaintiff's Exhibit P-74, and Journal Sheet of August, 1927 as Plaintiff's Exhibit P-75.

Q. The journal sheet, Plaintiff's Exhibit 75, handed you; what does that entry signify? A. This is an entry marked to close out the note account of Bernard R. Clutter, covering one Model 425, Shp. No. 4918, excavator, by re-sale of same to Harry Gotham. It shows the amount of $4,250 as a credit to bills receivable and a debit to merchandise sales.

Q. Is that item of $4,250, under date of August, 1927, credited to the B. R. Clutter bills receivable ac-

count, Exhibit No. P-74? A. This is the same credit as identified on the journal sheet, that is, as being the Clutter machine, and here the credit is on the Clutter note account.

Q. Mr. Downie, I will read you from the deposition of Bernard R. Clutter, taken at Lakewood, New Jersey, the 21st day of October, 1930:

Q42. "Relate as nearly as you can what took place when you and Mr. Downie went out into the yard of your home at Lakewood on this occasion?"

Answer: "Mr. Downie informed me that he wanted to talk over some business privately and that he didn't want any one to know anything about it except he and I. I asked him what the nature of the business was and he said it was regarding that drop bottom ditcher scoop that I had had made out at Joplin, Missouri. He explained that they—meaning the Keystone Company—I presume, or possibly, he, Rex Downie, had a patent,—I should have said taken out a patent on a drop bottom ditcher scoop, and that I apparently had made or had had made the first one at Joplin, Missouri, and that I could cooperate with them in the protection of this patent. I told Rex that if I had had the first one made and put into use, that it was my invention and not theirs, and that I could not see where they had any right to the patent. I don't remember all that was said, however after considerable jarring over the proposition, Rex informed me that I did not have money to go into court and fight the Keystone Driller Company, which was a fact. However, he said if there had been a wrong done, let's get together and see if we can right the wrong. I asked him in what way that could be accomplished. He said that he had a proposition to make me if I would be willing to consider it, and I asked him what it was. He said that they would sell me a new machine at half price, as this was the only opportunity that I felt that I had to realize off of my invention. I agreed to accept it. I asked Rex if we should go into the house and draw up a contract to that effect, and he said, 'No, not now.' He said, 'Now that is the ticklish part of the thing.' That it was a question as to whether or not there could be anything drawn up in writing that would be of any advantage. He also said that any papers to show that there was a deal existing be-

tween us might serve to invalidate the patent. He said that he would find out if there was any way that they could hold me and see me later. He also told me that I would have to sign settlement in full for the machine, and that they would later issue me a credit for the half interest, and that I would have to trust entirely to his honesty to carry out their part of the deal. He asked me not to say anything to Elmire or any one else as to what his business was down in Lakewood."

Is that true or not?

A. That is not a correct relation of the incident. There was an interview; but the secrecy put upon the matter here by Mr. Clutter is not correct. The inability to write anything as to our transaction is not in accordance with the facts. I don't remember all the material that is in that statement of Mr. Clutter's.

Q. Now I read you question No. 43:

"In your answer to the above question, you testified that Downie said that you could cooperate with them in the protection of this patent. Did he explain to you what you were to do in this respect?

Answer: Yes, sir."

Question 44:

"How were you to cooperate with him in the protection of the patent?

Answer: By keeping absolutely quiet in regards to my part of the invention."

Is that correct?

A. That is not correct. Mr. Clutter was to convey any rights he had to us; and we were willing, as I have said previously, to wrap the utility of whatever rights he had in with the utility, if any, of our own; and to recompense him in accordance with the degree, or contingent upon our own success in the business.

Q. Now I read Question 48 of the deposition:

"In this conversation you have just testified to with Mr. Rex Downie, did he explain or mention to you how he was going to protect the patent, or what the occasion was for asking you to cooperate with him in the protection of this patent?

Answer: He said that they had either started or were going to start a suit or suits on company or companies that were infringing."

Question 49:

"In your answer to Question 44 you said that you were to keep absolutely quiet in regard to your part of the invention. What part did that refer to?

Answer: The scoop that I had made at Joplin, Missouri."

Is that correct or not?

A. Well, there is a good bit comprehended there. There was no pledge of secrecy asked or given by Clutter as to his work at Joplin. It is true we did discuss the work he had done at Joplin to some extent. I was still interested in his construction, or in his story about it; in fact investigated it; but the colour put upon it there is not correct.

Q. To help you a little bit in separating it, that part referring either to the bringing of a suit or the intention of bringing suit; did or did not you disclose that to him? A. I may have, or may not. I am not able to say.

Q. Then coming to Question 49 and the answer, as to the fact that he was to keep quiet about the scoop he made at Joplin? A. Yes, sir.

Q. Is that true? A. No, sir, there was no understanding that he was to keep quiet about what he had done at Joplin. In fact the object was to get into the court definitely and to guard against his mis-recollection just what he had done at Joplin; and I think I advised Mr. Clutter that I was securing his affidavit for that reason and because the attorneys said that it was advisable to do so in matters of where earlier experiments had been carried along on a line similar to that in question. How much of this precisely I told Clutter, I don't know; but I will not say I did not advise him frankly as to my purpose.

Q. I read again from Mr. Clutter's deposition, Question 68:

"Do you recall the nature of these papers that were brought to you on Mr. Downie's second visit to Lakewood?

Answer: Not except that when they started to write the papers up Rex said that they were going to try to tie me hand and foot if such a thing was possible."

Did you say such a thing or not?

A. I do not recognize the expression nor the spirit indicated there. If Mr. Clutter means simply that I

wanted him to execute the affidavit as to his own story as to what he did at Joplin, then that is correct.

Q. The next question:

"Did you have an opportunity to read these papers?

Answer: Not to my recollection."

What do you know about that?

A. Clutter read the papers and was given ample leisure. Mr. Elmire saw him read them and I saw him read them in the notary's office there in that little town that Elmire mentioned, and where Mr. Clutter was arranging for his licenses for his White trucks.

Q. Question 70:

"Were you furnished a copy of any of the papers that they required you to sign on this occasion?

Answer: I was not."

Question 71:

"Did you request a copy?

Answer: Yes, I did."

Question 72:

"What did Mr. Downie say?

Answer: He said that they couldn't have any copies out, and that it was a question as to whether they could ever use the papers they had or not."

What is your statement as to that?

A. Again, that is drawn or pulled in the direction of secrecy here in regard to the transaction. I don't know whether a copy of Mr. Clutter's affidavit was retained by him. I did not make any record of it. But there was no objection to his having a copy. In fact, I would suppose from the nature of the case that he had a copy.

Q. Did you or did you not say that he could not have—"they"—referring to the company—could not have any copies out? A. No, sir, I made no such statement as that.

Q. Did you or did you not refuse to give Clutter copies upon his request? A. I did not make any refusal.

Q. Coming to Question 104, which relates to a purported meeting between you and Mr. Bernard R. Clutter on a road—"we"—referring to Mr. Clutter—was constructing near Roseland, New Jersey. The question is:

"Will you relate as nearly as you can the conversation you had with Mr. Rex Downie on his occasion near Roseland, New Jersey?

Answer: Rex informed me that they would have to take the machine back unless I could raise the money immediately, or a portion of it."

Is that right or is that not right?

A. Yes, sir, I told Mr. Clutter on one of those occasions we would take his machine unless he made some payments.

Q. And the following sentence is the answer:

"I informed him that if he took the machine away from me that it meant that I would lose anything that I might realize from the patent on the drop bottom ditcher scoop, and that if he did take the machine away that it was not going to do him any good."

A. I remember there came into Mr. Clutter's manner along about this time an indication that he felt that the fact of our transaction of 1925 gave him a means of pressure upon us in the matter of our proposed repossessing of the machines or our threatened repossessing of the machine. Yes, it may have been, so far as I know, in those words.

Q. Referring further to the answer:

"He said—referring to you—he did not want me to feel that way about it, and I informed him that those were the facts and he could take it or leave it, and that eventually I could pay him every cent that I owed the company for that machine."

Did Mr. Clutter make that statement?

A. I indicated to Bern. we did not want him to feel that just because we had title to the machines, we were desirous of putting him out of business. But as to our fear of his relating to the Byers Company, or any other, what he had done at Joplin, I said, as I said previously, he could put that in the newspapers if he wanted to; that it was neither here nor there as to what I was talking about, the payment of his account; but we did not want to just for the fact of his previous employment with us, whether it was a sufficient reason or not, as a reason for desiring to deal leniently with Clutter; we did not want to unnecessarily take away his livelihood. I probably intimated the fact. I am sure that I told Clutter this.

Q. I call your attention to Question 150, which reads:

"Defendant's Exhibit No. 40 makes reference to the fact that you signed an affidavit. Was this one of the papers that Mr. Downie brought down to Lakewood for you to sign so as to tie you hand and foot as he expressed it?

Answer: Evidently it was."

Question 151:

"When did you first discover that one of the papers you signed at Lakewood on that occasion was an affidavit?

Answer: When Mr. Downie was leaving he said 'There was an affidavit in these papers that you signed.'"

What is your recollection?

A. That is not correct. I told Bern. with Elmire there. Bern. read over the statement. I told him what it was; and, as I say, I think I probably told him the purpose of it was to record the facts as to his Joplin work; and I made no remark to the effect that there had been an affidavit among the papers he signed, upon leaving; and as being the first intimation to him to the effect.

Q. The next question, 153:

"The first you knew, then, that there was an affidavit in the papers was when he went out the door and made that statement that you have just referred to. Is that correct?

Answer: That is my recollection."

Does that accord with your recollection?

A. No, sir, that does not.

Q. Question—I guess it is a cross-question—cross-question 171:

"You don't remember of having subscribed to the affidavit before a notary. Is that right?

Answer: There was a man with Rex Downie at this time; as to whether or not he was a notary, I do not remember."

Cross-question 172:

"Did he or did he not administer an oath when you signed the papers?

Answer: Not to my recollection."

What is your recollection as to that?

A. Bern. is confused as to that. The man with me was Mr. Elmire. Mr. Elmire was always with me. I was never there with anyone else than Mr. Elmire.

Q. Where was this affidavit executed? A. At this notary's office in a little town there where Bern. was arranging for his licenses, I think, Tom's River.

Q. Did he or did he not administer the oath, the notary? A. The notary administered the notary's oath in due form after Clutter sat there and read the paper that I had prepared from the data obtained from a previous interview.

Q. I call your attention to cross-question 178, in which Mr. Clutter was asked:

> "Why didn't you apply for a patent on the device you experimented with in Joplin?
>
> Answer: Because I was informed by Mr. Oliver at that time, manager of the Joplin branch, of the Keystone Driller Co. that Rex Downie had gotten up a drop bottom ditcher scoop and was taking out or had taken out a patent, and that that office was not aware of that fact."

That is correct or not?

A. Well, as to what Mr. Oliver may have told Mr. Clutter, or what Mr. Clutter learned there at Joplin, I of course cannot say; but I know that there was—there would be no reason for Mr. Oliver to have told Mr. Clutter, in January, 1920, that I had made a drop bottom ditcher at Beaver Falls and had taken out a patent, because it had not occurred yet; so there must be some misrecollection there on Mr. Clutter's part.

Q. Mr. Downie, at any time later than the obtaining of these affidavits, I believe it was probably later than the filing of the bill in this case, were you approached by anybody representing that they were associated with or representing B. R. Clutter in regard to this Joplin incident?

Mr. Williams: I think, Your Honor, that is going rather far afield. I have not objected at all to any evidence, direct or indirect or hearsay, that this witness had or acquired. I have not even objected to his giving his reasons for what he said he did. But what is the purpose of now going into the question of whether he was approached by anybody after this suit was filed with reference to this matter?

Mr. May: The purpose is to discredit B. R. Clutter in this transaction so far as his testimony and his deposition are concerned.

The Court: It would be relevant for the purpose of showing Clutter's attitude before the time he gave his deposition. He may answer. Did anybody approach you with reference to the Bernard Clutter matter after the Byers suit filed in Cleveland, or any time before that?

A. Yes, sir, after the Byers suit was on, we were approached at Beaver Falls by Mr. George Wagner and Mr. Bird C. Clutter, a brother of Bern. Clutter's.

The Court: Who was Mr. Wagner?

A. Mr. George E. Wagner, a former employee of ours, and then an employee of the Star Drilling Company, and also a joint licensor of the Star Drilling Company.

The Court: How was he related to Bernard Clutter?

A. Bird C. Clutter is a brother of Bernard Clutter. Wagner is not related to Bern. Clutter.

The Court: Was he acquainted with him?

A. Yes, sir, very well acquainted.

Q. Is Bird C. Clutter also associated with Wagner in business? A. Yes, sir, they are both in the employ of the Star Company, and are licensors of the Star Ditcher. Their object was to—

Mr. Williams: Just a minute.

The Court: What did they say?

Mr. Williams: Tell what they said.

The Witness: All right.

Q. What did they say to you? A. I will have to say that the substance is of what they said. I did not make any copy of their precise words; but I am perfectly aware of the substance and the purpose on the trip. It was—

Mr. Williams: Just a minute. Let us have what was said. No assumptions or purposes.

Q. Just confine yourself to what they said; what proposition they put to you, as near as you can recall.

The Court: Or who did the talking as closely as you recall.

The Witness: Well, Mr. Wagner, mainly, spoke for them; and the closest approximation I could make to Mr. Wagner's language would be this: We came down

here to see you boys about this ditcher situation. We think your patent underlies ours and we would like to have a license. We understand that Bern. Clutter knows some information that could be used against you. Do you think that a license permitting the Star Company to continue, without having to make any further arrangements with the Keystone Company, could be effected? The interview of course occupied much more time than I have required here.

The Court: That was the substance of the conversation?

A. That was the precise substance, and those were the two elements of it; that is, that they desired a license, and they knew Bern. Clutter had information, and that the two things could be used for their purpose and our purpose.

The Court: All right. Anything further, Mr. May?

Q. Did these men make more than one trip or not? I have forgotten. A. Yes, sir, there were two trips.

Q. Do you know or not whether there was a letter sent by your company to each, Mr. B. C. Clutter and Mr. George E. Wagner? A. There were.

Mr. May: They are already in evidence.

Mr. Williams: Oh, I see. All right.

Q. I show you Exhibits P-45 and P-46 and ask you if those are the letters? A. Yes, sir, these are the letters written by us to Mr. Wagner and Mr. Bird Clutter in regard to this matter. These letters are dated April 12, 1929.

Q. Which exhibit is which letter? A. The letter to Clutter is P-46, and that to Wagner is P-45.

Q. What is Exhibit 112? A. It is a letter by Mr. Wagner addressed to Mr. J. V. Downie, of our company, dated April 20, 1929, in response to ours of April 12.

Mr. Richey: Judge Jones' decision in the Byers case was handed down January 23, 1929.

Mr. May: Not for the record. I have a statement of Mr. Williams here relating to correspondence from the banks and with Clutter, trying to get him to pay these notes. It is a mass of stuff. If they will admit it, it need not go in. (Statement of Mr. Williams read to the court by Mr. May.)

The Court: That has no bearing on Mr. Williams' point.

Mr. May: Except that if there were any secret about it, we would not have been making such an effort trying to collect these notes.

The Court: That is a matter of argument. Mr. Downie has testified and Mr. Bern. Clutter testified that they tried to collect the notes. There is no use loading up the record with that.

Mr. May: All right.

(Noon adjournment.)

(Afternoon session, Tuesday, May 12, 1931.)

(Narrative continued.) The matter of the advisability of the presentation of the facts that had been ascertained about the Joplin device was brought up in a conference I believe in the early part of 1929 at Beaver Falls between a number of our firm and counsel. At this conference there were in attendance Mr. Siggers, Mr. Richey, Mr. May, Mr. Vail Downey, my brother, and Mr. R. F. Patterson.

The Court: Was that after the Cleveland case was tried? A. Yes, sir, that would be after the Cleveland case.

(Narrative continued.) At the time of this conference Mr. Vail Downey was president of the company. This conference was occasioned by this approach of Mr. Wagner and Mr. Bird Clutter in the matter which I stated this morning, the matter of license for this Clutter, licensors of the Star Company.

The Court: Those letters were written in—

Mr. May: April, 1929.

The Court: Yes, was it after that?

A. Before that. That was at the time the letters were written.

(Narrative continued.) At this conference it was the advice of counsel, and this advice was followed, that these letters introduced this morning be written to Mr. Wagner and Mr. B. C. Clutter.

B. R. Clutter's full name is Bernard Ross Clutter. I have not seen his signature I believe.

Mr. May: You may cross examine.

Cross Examination by Mr. Williams.

(Narrative continued.) On Defendant's Exhibit 98 the writing in pencil at the top of the first page reading

as follows: "Dated April 11, 1925," is in my handwriting. I do not know when it was put there. I do not believe I could say except that it must have been subsequently to the writing or typing of the memorandum; otherwise it would have been typed.

The Court: Let me see it, Mr. Williams.

(Document shown court.)

The Court: The affidavit is dated the 16th.

Mr. Williams: Yes.

The Court: And this bears date 5 days earlier.

Mr. Williams: I think so.

Q. On the second page, in the margin, at the left hand side, I see pencil notes there: "Inc. to April 11, 1927"; and then below that the word "Copy"; and below that the words in pencil "of the machine"—perhaps you can read what that is. Is that your handwriting? A. These marginal notes on the second page are all in my hand. The first is i.e.—id est—to April 11, 1927; and that connects the last paragraph there, which is bracketed, by a line. The meaning, as I recall this, is that the "one-quarter of the price of the machine and the equipment named in the second paragraph shall be suspended only until two years after date hereof"—and that is to April 11th, 1927.

Q. Oh, yes. A. This copy here, I happen to remember, was a notation to the stenographer to copy this paragraph in some correspondence or other with Clutter, and I believe it will be found verbatim in that correspondence. Down here at the end of the final paragraph there is the notation in parenthesis "of the machine"; and again in parenthesis "understood"; and then in the third parenthesis "noted, December 3rd, 1928."

Q. That was some memorandum made there with reference to some correspondence you were having at the time with Clutter? A. Those are notes, I suppose, nearer this date, December, 1928. They may have been this correspondence, I said, where I copied that paragraph.

Q. On the face of the letter from Clutter to you of January 9, 1928, marked in this case as Defendant's Exhibit No. 104, on the first page I see some words underlined, and across them, diagonally across the lines of writing, the words in pencil "See over." Is that your handwriting? A. That is my hand.

Q. You made the underscoring on that? A. I assume I did.

Q. At the top left in the pencil are these words "1904—two ciphers—contingent final pt. offer 500 instead of larger contingent payment." And that last sentence is stricken out. Did you write those words on there? A. Those notations are in my hand.

Q. And they were also made in view of some correspondence you were having at the time with Clutter, were they not? A. Undoubtedly.

Q. And on the back of the first page some matter in writing there. I will ask you if you can read that? A. That is in my hand.

Q. Please read it. A. This may refer to understandings that if KD should repossess both machines, and hence could not fulfil par. 2 of contract by a machine-credit, they would reduce the amount par. 2 by one-half and pay (if and when due) in cash. At least this was writer's intention and recollection of agreement (verbal) in regard to the point. R. D. December 3, 1928.

Q. R. D., that is your initials? A. My initials.

Mr. May: What was the date of the letter and the number of the Exhibit?

Mr. Williams: The letter itself is dated January 9, 1928. The memorandum date on the back of page 1 was December 3rd, 1928.

Q. At the upper right hand corner of the first page of the letter of November 28, 1928, from Clutter to you, Defendant's Exhibit No. 110, there appears some writing in pencil. Did you write that there? A. These notations are in my hand.

Q. Will you please read what those notations are? A. There are five lines in the notation. The first one is "Review facts chronologically." New line: "Copy in par. 4." New line: "State first quarter satisfied." Fourth line: "Cite offer half cash in lieu of or in satisfac of second quarter,—accept by accept of ck." Fifth line; "Leaving 476? remaining contingent upon lit"—presumably an abbreviation for litigation.

Q. When did you first become employed by the Keystone Driller Co., Mr. Downie? A. About 1912 or 1911; I ran drilling machines for a summer or two.

Q. What was your position with the company in 1919? A. I came with the company for permanent and continuous employment in about November of 1919 or

December, and my job was demonstrating, and a trouble man on field machines.

Q. Did you have anything to do at that time with the patents or inventions of the company? A. No, sir, nothing in the way of managing the same. I had some ideas.

(Narrative continued.) In 1920 my duties with the company were, continuing as I have said, and interspersed with some developments of scoops, beginning early in 1920, I made a six roll skimmer. As to whether I did this work by myself I will say for the drafting work I frequently had assistance although my assembling and drawings I did myself. Mr. Wagner was in charge of the engineering department. I was merely employed in the designing end, employed in writing instruction books and answering trouble letters about the machines, and so forth.

Mr. May: Give Mr. Wagner's name?

A. Mr. George E. Wagner.

(Narrative continued.) I don't remember exactly when Mr. Wagner left the employ of the company, but I would place it along in the middle of 1921. As to who took his place as the head of the development or invention department I would say that my Father was always the managing engineer and continued to be so even after Mr. Wagner's leaving our employ, although I assisted him, and I presume I would be regarded as his chief assistant in more or less direct management under his instructions from the engineering department. In fact, my Father was the head of it in the sense even when Mr. Wagner was there, except that he was not experienced as an engineer, whereas Mr. Wagner was. In the year 1925 I was secretary and general manager and more or less directly managed the engineering with the company. In fact I was the managerial head of the engineering or development department at that time. That was also true in 1928 and is still true.

Q. Now when I spoke of your being head of the development or invention department, I meant to include that you had charge of the solicitation, or, rather, determining what patents should be taken out or what inventions should be covered by patents? A. What was the date again?

Q. In 1921, after Mr. Wagner left. A. No, sir, I did not have the election in that matter at that time.

Q. Your father had the final determination? A. My father.

Q. Most, if not all, matters of that character first came to you for your attention, did they not? A. No, sir, not if they originated with anyone but myself. If it were one of my own ideas, I worked it up and presented it to him.

Q. In 1921, how many men were there engaged in the patent or developing department,—whatever you called it? A. We called it the engineering department, and I think it would be correct to say there would be four, about four individuals, including myself as part time member of the department; two of those being draftsmen.

Q. You say in 1921 you were not an experienced engineer; but previous to that you had made one or two inventions, had you not? A. Yes, sir, in 1920. But I meant engineering in the sense as distinct from invention.

Q. What distinction do you make between the two, engineering and invention? A. Of course the two lines of activity tend to lap to some extent; but I meant technically qualified to determine the strengths of materials and other features entering into machine design. I was acquiring some practical knowledge of that matter, of machine design, but I was not in charge of the determination of those things.

Q. Throughout your experience with this company what function did the engineering department have other than the developing by its own members of any inventions? Did it get ideas from others in the force, or men in the field, or men in the shops? A. Oh, we have ideas presented by operators and by customers and from individuals in the force, both within the engineering department and by salesmen. We have no fixed lines within which we will listen to an idea, or from outside of which we will not listen to an idea. We just gather them where we can.

Q. It was general practice, was it not, throughout this time that any ideas of any employees or any information with respect to improvements or inventions in machines would be referred to the engineering department? A. They would come to the attention of either R. M. Downie, in those earlier years, or to me, as a member of the engineering department, if they related to excavators. I was not at that time however directly in charge of drill design, nor pump design.

Q. I am speaking particularly of excavators. It was the practice that any such ideas or information would immediately come up to the engineering department? A. That would be a logical channel of presentation to the company.

Q. How many times did you see Bern. Clutter in the spring of 1925 when you were discussing this matter of the affidavit and the contract? A. I think that I probably saw Bern. Clutter, to carry your question back a month or two, perhaps once in the final months of 1924, and then once in the early months of 1925, preceding the date of this affidavit.

Q. And each time you went to see him at his home or work? A. Yes, sir, I remember it was somewhere in New Jersey that I saw him on each occasion.

Q. And it was on the second occasion in the spring of 1925 that he signed the affidavits that you presented to him, was it not? A. Yes, sir, that would be either the second or third; third, if there were three; second, if there were two.

Q. Why was it that this memorandum of contract that bears the pencil date of April 11, 1925; why was not that signed? A. Because at the time of the execution of the affidavit, I learned by direct questioning of Clutter, and after having informed myself further from counsel as to the worth of what Clutter had; that is to say, Clutter then advised me point blank that he did not really have an application in the patent office; and I had learned from counsel in the meantime that if he had not yet applied, he had no right to apply, because the work had occurred too far before; and therefore there was no object, from my view, in having Clutter execute the agreement.

Q. Did Clutter see the agreement? Did you show it to him? A. Yes, sir, I gave Clutter a copy or two of it; I don't know exactly.

Q. Mr. Elmire says there were only two copies made. Do you say there were more than two copies made? A. I don't know that there were more than two; I know that Clutter read the agreement, and we had it there among us.

Q. Did Clutter object to signing it? A. No, sir.

Q. Did you ask him to sign it? A. No, sir.

Q. Did he ask you whether he should sign it? A. I don't know that he did.

Q. Will you say that he did not? A. Do I say that he did not?

Q. Ask you to have the contract executed by you and himself or by the company and himself? A. I don't know that it was a point with him any more than with us, that it should be signed or not signed. As I said, there was nothing that Clutter was to do that he had not already done theretofore in respect to his rights there at Joplin, if he had any; and therefore there was no reason, from our viewpoint, why he should sign it, so it was a mere matter of going ahead on our part. In other words, there was no further consideration from Clutter coming to us; it was all a matter of what we might owe Clutter on account of my original deal.

Q. You say Clutter had already done what he was to do; what was that? A. Execute the affidavit.

Q. Clutter had not received what he was to receive for doing that, had he? A. No, sir, he was to receive this quarter credit.

Q. He was to receive two quarters credit? A. No, one quarter.

Q. One quarter direct and one quarter contingent? A. One outright and one contingent.

Q. The affidavit made no reference to that credit, either actual or contingent, did it? A. I do not recall that it does. I do not believe the matter of the credit had to do with the facts as to what Bern. carried on at Joplin. This was a means of satisfying Bern.'s feeling there he ought to have something, whether out of the Joplin experiment or what. Anyway he had satisfied the requirement that he should reduce his story to writing for counsel.

Q. He was interested in getting something for it? A. Yes, sir.

Q. You were willing to give him something? A. I was willing to give him a quarter credit on the machine.

Q. And another quarter contingent? A. Another quarter contingent.

Q. Why was not the agreement that showed his right to get something for having signed the affidavit, having been reduced to writing; why was it not signed? A. Because, as I have said, Mr. Clutter considered his affidavit and executed it, and I had learned that he had no application on any detailed or general scoop construction; and that, if he did not have an application, then he was barred from filing an application; therefore, there was nothing more that Clutter could do.

Q. There is nothing in that memorandum of contract that recites that Clutter did have anything, is there? A. That he did have anything?

Q. Is there any recital there that he had anything to convey; or does he agree or warrant that he had anything to convey? A. No, sir. There would be no warranty here that he had something to convey. It says "all rights, title or interest that he may now have or may later acquire, as inventor or co-inventor, in that certain pivoted bottomed ditcher scoop contrived by himself, or by him and Herbert Wallower."

Q. Anything he may have now or may get in the future; so there is no warranty there that he had anything? A. No, sir, I would not say that is a warranty there on the part of Clutter.

Q. Then I take it that Clutter was content with your verbal assurance that you would pay him for making that affidavit, and did not require that this contract be signed so that he should have some written evidence of your obligation to him? A. I presume that the issuance of the credit, one quarter credit on the machine was relied upon by Clutter. I can say he must have relied upon our issuing that credit.

Q. He also relied upon your statement that you would give him a contingent credit for an additional quarter, did he not? A. Yes, sir, I believe so.

Q. You must have had considerable influence with Clutter, having already prepared a contract and shown it to him, that he would not insist upon your signing it, and taking your word? A. I of course did not know at the time I prepared this that it would not be signed. I prepared it to be executed in the ordinary course.

Q. It would have been necessary for you to ask him to execute it? A. If I found he had anything to convey under the deal I had made with him, I would have required him to execute it.

Q. Then, on that statement, the entire $4,000 was paid simply for his execution of that affidavit, is that true? A. No, sir.

Q. What else was there then? A. It was consideration for his having promised that he would convey whatever he had, if anything, and I thought he had an application in the patent office.

Q. But at the time you closed the deal with him you say you knew he had no application? A. That is carrying forward the deal I had made previously with him.

Q. Then, when you finally completed the deal, and were still to pay him $4,000, the only thing you were to get was his signature to that affidavit; that is true; that is all you were to get? A. That is all Clutter actually did.

Q. That is all he agreed to do? A. No, sir.

Q. What else did he agree to do? A. He would make over to the Keystone Company his patent.

Q. But you knew by that time he had no patent? A. No, sir, I did not, not at the time I made the agreement with him.

Q. The final time you went to see him, when you had this paper with you and showed it to him, at that time you knew he had no patent? A. Yes, sir. I see you are speaking of the time of the signing of the affidavit as being the time of the transaction.

Q. Is that not true? A. It is not the time.

Q. Then you saw him at least three times, if not four times, in 1925, did you not? A. It could not have been four times; whether it was two or three times I am not certain. But the agreement with Clutter was made at an earlier time than the time at which the affidavit was executed; and that is what I have governed myself by in the discharge of the deal.

Q. You made a verbal agreement with him the first time you and Mr. Elmire went down? A. I made an agreement with Clutter, it would be either the first, or second if there were three occasions; what I am inclined to think is that it would be on about the second occasion.

Q. According to the date of the affidavit made there on April 16, when the affidavit was signed, that would be one time? A. That would be a clear date.

Q. And this contract bears date of April 11; that would be another time? A. If that date is correct. I cannot say that April 11 is the date when I left.

Q. But at some time shortly before the date the affidavit was executed, you went down and had with you this memorandum agreement? A. That might have been the same date on which the affidavit was executed, for all that I can remember.

Q. If that is your judgment, then,—is it your judgment, then, that the date you showed him this memorandum contract was the date upon which the affidavit was executed, is that right? A. I know that the two were handled somewhat together, definitely together. I am unable to say, however, that it is the same date or that

it might have been the date I have noted in pencil or at some subsequent time. What my reason was for noting on there April 11, I do not now know.

Q. Put it this way: At any rate on the day the affidavit was executed by Clutter and given to you, you knew he had no patent or application for patent? A. That is correct.

Q. And that, for signing that affidavit, he was to get a present credit of one quarter of the value of the excavator he was going to buy, and get another quarter contingent credit, depending upon how your litigation turned out? A. Not for signing the affidavit.

Q. What did he get it for? A. In consideration of his earlier promise that if he had any rights, or came to have any, out of that Joplin ditcher, as inventor or coinventor, he would make such rights over to the Keystone Company.

Q. He was also to sign an affidavit? A. He was also to sign an affidavit.

Q. And at the time the affidavit was signed and the deal closed, you knew he had no patent or application for patent? A. That is correct.

Q. What I am now going to ask you, and at the danger or risk of tiresomeness, I will ask you, again, what present or future consideration did Clutter give for this $4,000 credit and contingent credit other than the signing of the affidavit? A. Nothing materialized from that except the signing of that affidavit; but there is a definite distinction, and I have practiced that definite distinction, in accordance with it, between that as a conveyance from Clutter to us, and what I have said was a conveyance, first, and the promise of the signing of the affidavit or the reduction of his story to writing.

Q. Is this a fair statement about the patent business? When you finally closed the deal you were still to give him a $4,000 credit, and a contingent credit, although you then knew he had nothing to give except the signing of the affidavit; is that a fair way of putting it? A. That is; except in the one respect, that you say, when we finally closed the deal. This deal was a deal between the Keystone Company and Bernard Clutter. When I said we would give him thus and so for thus and so.

Q. You give him $4,000 in credit for some patent rights and for an affidavit? A. That is right.

Q. How did you get the idea that he had any patent rights? A. From himself.

Q. He told you? A. I understood it definitely from him, Clutter is, as I say, somewhat evasive at times; and my best belief was that Clutter had some rights in regard to his work at Joplin, and that the safe and conservative thing was to secure them for the company; and I felt that we could afford to pay something for that, if anything materialized.

Q. And so, upon the basis of that understanding which you secured from him that he had something, you had told him you would give him $4,000 for the two things; and then when you found out he had misled you, he had been evasive with you, that he had not told you the truth about his patent rights, nevertheless you were still going to give him the $4,000 if he signed the affidavit? A. The mere fact that I found I had been misled by him does not relieve me from meeting my half of the bargain.

Q. You got the understanding from him that he had some patent rights, and he misled you? A. I believed that Clutter either had an application in the patent office—or now as I say, at the first interview, I did not know that he then had no right to apply for a patent on either the combination structure or some detail of the structure at Joplin. I did not know that he had or that he had not, and I desired to make a deal whereby I would secure for the company whatever he might have for whatever it might come to be worth.

Q. But you knew at the time the affidavit was signed that he had no rights, did you not? A. Yes, sir, I believed that at the time he had no rights.

Q. So with that belief, all you were getting was the signature of that affidavit? A. I believed at the time of the signing of the affidavit that that was all that would come of it; you are correct in that.

The Court: Mr. Williams, is that amount $4,000 or $3,400?

Mr. Williams: About $4,000; it was one-quarter of $8,200—no, two quarters.

The Court: You gave him credit for only $1,700.

Mr. Corbett: One quarter down.

The Court: $3,400.

Mr. Mahoney: They made some reduction on account of the fact that he did not get some of the parts; so they had to come down on it. The original agreement was based on $8,200.

The Court: He was entitled to half of $8,200, and by the method of handling the deal, probably on his own election, it amounted to only $3,400, is that true?

Mr. Williams: Because of some counter-credits and charges for parts and things he claimed he did not get. The whole thing was billed at $8,240.00, but he afterwards claimed there were certain scoops or equipment that he did not get. So that should have been reduced. But the contract is clear.

The Court: What does the contract say about the amount?

Mr. Williams: "In consideration of the above the Keystone Driller Co. hereby conveys to Bern. R. Clutter a one fourth ownership in that certain Keystone excavator with equipment as furnished to him under contract-lease dated February 28th, 1925."

Mr. Corbett: It does not give the value.

Mr. Williams: It does not give the value. He was to get a one-quarter interest flat; and then he was to get another one-quarter—

The Court: I understand that. Had he bought that machine at that time?

Mr. Williams: I will just explain that in a moment to get it clear in Your Honor's mind.

The Court: It does not make much difference.

Mr. Williams: There had been some correspondence before that.

The Court: I do not think it makes so much difference.

Mr. Williams: When this thing first came up, the testimony is that Clutter wanted an excavator. They purposed to sell it to him. He did not have the cash. So they would sell it to him, $500 down, the balance on time notes varying in amounts, averaging $425 or $430. The first two notes were a little different in amount.

Mr. May: The first payment was $515.

Mr. Williams: And then the first note was different.

Mr. May: No, they are all even amounts.

The Court: It does not make any difference in the case.

Mr. Williams: He was to get a quarter of it. It was billed to him at $8,200. Approximately, he was to have $4,100, $2,050 immediate credit, and $2,050 contingent credit. But he claims he did not get all the stuff billed to him; therefore the amount was reduced.

The Court: All right.

Q. You recognized that contract as being in force for some years after 1925, did you not? A. As modified from time to time.

Q. By you and Clutter? A. Yes, sir. I regarded the deal as good and that—that is—in the sense as valid; and that we should discharge it.

Q. You said on your direct examination that you learned about Clutter's work at Joplin some time in January, 1921? A. That is right.

Q. You were told by Lyle Hazen? A. That is right.

Q. Who was Lyle Hazen? A. Lyle Hazen was superintendent of our Joplin plant.

Q. What was that Joplin plant? A. The Joplin plant?

Q. At that time. A. At that time it employed relatively fewer men than at Beaver Falls. I don't know how many, but, possibly, 50, as a round number; and manufactured drills; and they had out there two or three steam hammers; and we made drill tools and heavy forged pieces. There was also a sales office there for selling drills, pumps and excavators.

Q. You had a depository there, or warehouse, for excavators, and there was a sales branch there? A. Yes, sir. We occasionally stopped excavators or pumps there.

Q. You also had facilities there for repairing excavators, did you not? A. Yes, sir, to some extent, for the field.

Q. How big a town was Joplin, Mo. at that time, in 1921? A. I do not know at all; I could not guess.

Q. 5,000 or 10,000? A. I would think maybe 10,000, but that might be low.

Q. What did you do to follow up what Mr. Hazen told you about that Joplin work of Clutter? A. To follow it up?

Q. Yes. A. That is, you mean by way of investigation?

Q. Yes, to get further information. A. I asked other visitors from Joplin as I had opportunity at the time of Mr. Hazen's visit, which was at the time of our annual sales conference in January, 1921. And subsequently, I did not, during 1921 and 1922, have any one make any special trip or field investigations, beyond merely inquiring of those who came in from Joplin, and who had seen it. Several of our force had seen the work out there; and once I learned it from Mr. Hazen, I asked Mr. Oliver and Mr. Culbertson, both senior and junior.

Q. And they told you that Wallower or Clutter, or both, had used a ditcher scoop on a Keystone excavator, did they not? A. Their advice was in part confirmatory, that is, there had been this work carried on out there, although it was not long, perhaps 1922 or 1923, I don't know just on what occasion; and I am not sure that all of these, or which ones of these, members of the force were there at the same conference Mr. Hazen was at in 1921.

Q. Was not the first information you got about it that a skimmer scoop had been used on an excavator? A. That a special scoop, patterned after a skimmer scoop, and usable alternately as a skimmer scoop, had been used.

Q. And told it had been used for instroke work? A. That it was hung in place of a regular Clutter bucket, in the same position as the Clutter bucket. I think I understood that from the first from Mr. Hazen.

Q. I show you Exhibit P-73, a statement by H. H. Wallower. Who prepared that statement? A. I don't know—either Brown Ransome, I would say, or Mr. Wallower himself. The statement was secured by Mr. Brown Ransome at our instance from Beaver Falls and upon one of his trips west to the Joplin plant. Brown Ransome was acquainted personally with Mr. Wallower.

Q. It bears date of May 8th, 1925? A. That is correct.

Q. You authorized that statement to be gotten? A. I asked Mr. Ransome to see Mr. Wallower, and asked him to get us a reduction to writing or his recollection of the work he did there at Joplin.

Q. Did you sell a machine to Mr. Wallower at that time? A. No, sir.

Q. What consideration did you give him for this statement? A. He asked no consideration and we offered none.

Q. Did you have any contract with Mr. Wallower of any kind with respect to this statement? A. No, sir, there was no contract.

Q. Did you have any contract with him at any time? A. Oh, we have had contracts with him in his purchase of machines undoubtedly.

Q. When did you sell him machines? A. Well, he owned a machine or two, whichever it was, at the time he did the work there at Joplin.

Q. Clutter's work was done on a Keystone Company machine, was it not? A. That is right.

Q. What other times did you sell Wallower any machines or excavators? A. I don't know whether he ever owned any Keystones other than those two or not.

Q. Mr. Wallower went out of the excavating business about 1921 or thereabouts, did he not? A. I don't know how long he had been in that work. I know he has worked here on this one job. He returned the ditcher attachments to us for credit; and I understand from the depositions here—Mr. Clutter's I believe it is—that he sold his machines sometime along in 1921, I think, thereabouts; but the ditcher attachments were returned to us for credit shortly after the Joplin job.

Q. You mean this skimmer scoop device, or similar to a skimmer scoop Clutter had used on this instroke work? A. No, sir, not the scoop; the dipper attachment; I mean by that the stick, the bridle, and things peculiar to ditching work that he had used in his cellar job.

Q. Now, you said that some employee finally dug up one of those old skimmer scoops that had been used by Clutter in Joplin in 1919 or 1920. Did you see the scoop? A. I didn't say that he dug up one of those scoops. I say that he was instructed to find one if he could and send it in.

Q. Well, did he find one? A. He found a scoop.

Q. He found a scoop. Did you see it? A. I assume that I saw it. I do not remember actually seeing it.

Q. But you don't know whether it was the one that Clutter used or not? A. I couldn't answer for that, whether it is one of the earlier scoops or not. I understood at that time that Mr. Hazen thought it was one, and that is for what it is worth.

Q. What did you do with it? A. I asked Mr. Hazen on one of his trips in to set it up in the shop and rig it, supply the parts that were missing if and as he needed them, taking the skimmer trappings off, if they were with it—I am not certain as to whether they were attached or not—and connected up with the machine.

Q. And after he did that, what did you do with it? Where is it now? A. So far as I know, it is in the plant at Beaver Falls, but I have not checked up to see that it is there. It was laid aside, and I assume that it would not have been destroyed without an authorization.

Q. Well, from 1921, when you first heard of this Clutter development, until 1925, or possibly December of

1924, you never talked to Clutter about it, did you? A. I do not remember that I either did or did not ever talk to or see Clutter. I don't remember whether I saw Bern Clutter between 1921 and '25 or not.

Q. You don't have any personal recollection of ever having spoken to him about this Joplin work until the last of 1924 or in '25? A. Now, Clutter was at the Beaver Falls plant some time along about the time he went to Trinidad, and was to have demonstrated three machines down there for us, and I think that would be after the Joplin work, because it was after I was in the continuous employ of the company.

Q. After you had heard about his work at Joplin? A. I do not connect it that way. It might or might not have been before the date that he was at the Beaver Falls plant.

Q. He was working for you then, or for your company? A. Well, no; but he was to go to Trinidad for us, though he had not up to that time been working for us.

Q. That was some time along in 1922 or '23, wasn't it? A. No, I would say earlier than that, because these Trinidad machines were steamers, and had certain size of boiler I happen to remember, and that size machine, and size boiler, was not shipped in 1922 or '23. A smaller boiler made before that was of the size made in 1920, and I think not later than a month or two into 1921; so if Clutter left in the middle of 1920, I suppose those machines were shipped in early 1920—though I don't know that they were—and then Clutter would have come through there on his way for that demonstration before I had heard of the job. But if it was after January, then I had heard of the Joplin work.

The Court: You say he went to Trinidad for your company?

The Witness: Yes, sir. He did demonstrating for us years before, and worked for us as an operator.

Mr. May: I think it appears pretty clear in Mr. Clutter's deposition.

Q. Well, it is clear that Clutter was not working for the Keystone Company when he did this work at Joplin; that is true, isn't it?

Mr. Richey: On what work, Mr. Williams?

Mr. Williams: At this work on skimmer scoop, or whatever it is; he was working for Wallower.

Mr. Richey: Well, he said he did some of this work on skimmer scoop before he left the employ of the company.

Mr. Mahoney: No.

Mr. Williams: No such testimony.

Q. Well, you don't know whether he did or not? A. You mean, do I know now that Clutter was not in our employ? Yes, I know that now.

Q. That Clutter was not in your employ in the latter part of 1919 or the year 1920? A. I know that now, but I didn't know that then.

Q. But you know that now, that he was then? A. That is correct.

Mr. Richey: Here is what he said, page 23 of his deposition:

"When did you first conceive the idea of using a rigid drop bottom bucket on an instroke ditching machine? A. In 1916.

Q. Why did you not put this idea in use at that time? A. The opportunity was not favorable.

Q. In what way was it not favorable? A. I was working for the Keystone Driller Company and the patent laws as I understood them were such that the company that you are working for hold certain rights over inventions that are gotten out, or are entitled to rights in them."

Mr. Williams: I said that he was not working for the Keystone Company when he did this work in Joplin, and Downie says that is right.

Mr. Richey: You are trying to leave out the important part.

Mr. Williams: Are you now claiming his invention because he conceived it when he may have been working for you?

Mr. Richey: No; I am claiming if he made the invention the company was entitled to it, and it don't make any difference, as far as this case is concerned, who made the invention.

Mr. Corbett: Are you going so far as to say that the company was entitled to it, and that it was all right for Mr. Downie to make an application for it, even though Clutter had developed it?

Mr. Richey: Under the circumstances, yes. Submitted it to a patent lawyer at that time for him to determine, and he determines he is the inventor and files

the application, I will show you authority to the effect that the court at this date should not go back and disturb what patent lawyers and experts did at that time, with all the facts before them.

Mr. Corbett: Do you mean to assert, Mr. Richey, that as a patent attorney, that if this man Clutter made or conceived this invention, and that six years later he had reduced it to practice while in somebody's else employ, that Mr. Downie could file an application and get a valid patent on it?

Mr. Richey: I say it don't make any difference whether Clutter's claim is right or wrong. Of course, you are not setting the facts out as they are.

Mr. Corbett: We are.

Mr. Richey: No, here are a plurality of people working for a company; there are two or three of them who claim to have made the invention. It is submitted to somebody at that time who knows about those things—

Mr. Corbett: That is not the case.

Mr. Richey: Certainly it is.

Mr. Corbett: Who submitted it?

Mr. Richey: He submitted it to Mr. Siggers.

Mr. Williams: Did you tell Siggers that Clutter had conceived this thing in 1916?

Mr. Richey: No, we did not.

Mr. Williams: That is the thing we are talking about.

Q. Did you tell Mr. Siggers, or any of these attorneys, that Clutter had this conception away back in 1916? A. I don't know that I told Siggers in 1925 that Hazen or that Clutter had thought of the scoop further back, because I wasn't sure whether he had.

Q. In fact, you never knew, did you; never heard of it until the Clutter deposition came out? A. I don't know that I did. I may have.

Mr. Richey: The leading case on that is that United States Gypsum case, in the 7th Circuit. Judge Baker wrote the opinion.

Mr. Corbett: Your Honor, we will be glad to argue that point at the proper time.

The Court: Can you give us a reference to the case?

Mr. Richey: I don't remember the citation, but I will look it up and give it to you. To the effect that if a plurality of people work for a company and make an invention and submit it to somebody, at that time to decide whose it is, and the patent lawyer decides, why the

court won't disturb that unless it is a very, very clear case to the contrary.

The Court: Don't the employees have to be under contract to their employer?

Mr. Richey: Yes, I think that is true, Your Honor, but this Mr. Clutter thought at that time, don't you see, that it should go to the company, and no doubt it would have gone to the company, because that is the usual course in those things.

The Court: Well, that was a misapprehension on his part.

Mr. Richey: Yes, that is what I say.

Mr. Corbett: He didn't say that. He said rights, and that might well have been shop rights.

The Court: Well, I am laboring under the assumption that in the absence of a contract to assign, the employer is entitled to nothing but the shop rights of the invention of his employees.

Mr. Richey: Yes, that is the usual thing, and in nearly every case you will find that is what happens where people work this way. And that is what Clutter said. And that is another insight to his character. He thought the company would get a shop right in it, and that he didn't do it because he thought he could beat them out of it. He admits that.

Mr. Williams: Well, they know the fellow they were dealing with.

Q. Now, you said that you made up a credit memorandum to go on Clutter's account when you came back from Lakewood. Now, when was that? A. Well, that would be from the date of the affidavit along in the latter part of April, 1925.

Q. To whom did you give that credit memorandum? A. To Mr. Smith.

Q. And that called for a credit of one-fourth of the price of the machine, did it not? A. That is right; that is what it was to be.

Q. And that was the absolute credit, and of course not the contingent one? A. That is right; unconditioned and forthwith.

Q. Although it did not get on the books for about a year and a half or something like that? A. Apparently not.

The Court: Well, didn't that one-quarter credit get on the books, Mr. Williams, December 31, 1926?

Mr. Williams: That got on the books December 31, 1926,—about a year and eight or nine months after it was due.

The Witness: Well, Mr. Smith said that he thought that was in some way a contingent credit. That was his misunderstanding.

The Court: Well, it looks now as if he might have been right about that.

Mr. Williams: Yes, it took a long time to get it there.

The Witness: Well, I didn't know, and I thought that during that year and nine months that that credit had been issued and that Clutter's account had been reduced accordingly, and was always explicit with Mr. Smith, if he had asked me about Clutter's account, that it should be looked at in the light of—that is, an actual account taken for what it was as having been reduced by the credit. I did not know at the time that came out that Clutter had been held out of his credit.

Q. When did you repossess this first Clutter machine? A. Well, it would be along in 1927.

Q. Well, it was about the time that he was given the credit of $4,250.00, dated August 11, 1927? A. Yes, that would be about the date. Something a little prior to that, because this showed that the machine had been sold to somebody else, and the equity transferred to another account.

The Court: Did you have the advice of counsel in the preparation of the Bern Clutter affidavit and the Bern Clutter agreement?

The Witness: I had talked to Mr. Siggers about it, whether it would be—you mean the advice of counsel as to whether to secure the affidavit?

The Court: No; did they assist you in any way in preparation?

The Witness: No, sir. I drafted the affidavit.

The Court: And also the agreement?

The Witness: The agreement also.

The Court: Who drafted the Wallower affidavit?

The Witness: That was made at Joplin, or at that place in Oklahoma, wherever Mr. Wallower executed it, and according to whether he had it drawn or whether Mr. Ransome had it drawn, I cannot answer as to the Wallower affidavit.

Q. Prior to the time that Wagner and B. C. Clutter came to see you in Beaver Falls, your company had

served notice on Star Driller Company of infringement of your patent, had you not? A. You say, prior to that?

Q. Prior to that visit? A. Yes, prior to that time.

Q. So there was first the notice of infringement of your patent, and then that visit by them to you? A. Well, you say "then"—that was not immediately following.

Q. Well, I mean after that? A. Yes, I mean subsequently.

Q. And your company has never brought suit against the Star Driller Company, has it? A. No, we have not entered suit. We have only entered suit against about three or four of the fifteen infringers.

Q. Mr. Downie, I show you an affidavit purporting to have been signed by yourself and filed in this case on December 31, 1930. I ask you if that is your signature at the bottom of the last page? A. Yes, sir, that is my signature.

Q. And you swore to it as appears there as having been subscribed and sworn to before a notary? A. Yes, sir.

(Affidavit referred to marked "Defendant's Exhibit 129.")

The Court: I assume as to that affidavit, Mr. Williams, if you think that is contrary to his testimony, you ought to call his attention to anything you are relying upon and give him a chance to explain it.

Q. Now, Mr. Downie, I read in this affidavit that has been marked Exhibit 129, this statement: "As soon as I learned of the Joplin machine and experiment, I investigated the same and reported what I learned about the machine and the experiment to Mr. E. G. Siggers, Washington, D. C., who was at that time our patent attorney and who is now deceased. I also reported to him my own work on the machine of the patent. Mr. Siggers reported that the Joplin experiment was an abandoned experiment. He also advised that the patent application should be filed in my name, which was done at his advice. He prepared the application for the patent, advising me that it did not embody any invention in the Joplin machine, and accordingly I signed the same and it was filed." Now, that was the understanding of the facts as you had them in 1921 and also when you signed that affidavit, is it not? A. That is correct.

Q. Your claim was then and is now that there was no invention of Clutter's in your patent? A. That is right.

Mr. Richey: He moreover claimed there was no invention in what he done.

Mr. Williams: So it is not the question of filing an application in the name of one man or another. They are not the same thing—so they claim.

Mr. Richey: Well, we say that there is nothing in common between the two.

The Court: They would have the right to show, on their theory of it, if you could show it was invention, you could show it on another theory.

Mr. Richey: Well, we present it on the theory that there wasn't invention in what Clutter did and you come along and say it is, and that we have it in our patent. We say if that is so, then it was put up to Mr. Siggers to say in whose name it was to be filed, and he said Mr. Downie's.

Mr. Corbett: We don't say that there was any invention in what Mr. Clutter did. We say it was old, and he did it in public, and after he did it in public, nobody could come along and claim invention on it.

The Court: You claim this is so old that even Bernard Clutter couldn't get a patent on it?

Mr. Corbett: Why, surely, but aside from that, there is nothing in this record to show that the Keystone Driller Company or Bernard Clutter—as to whether the application should be put in his name or in the name of someone else.

The Court: That is not the claim.

Mr. Williams: Well, that is what Mr. Richey is claiming.

The Court: Oh, no.

Mr. Richey: I said he claimed he made the invention while he was in our employ, and he concealed it because he knew, or at least thought we were entitled to it, and that if it had gone on and developed, that it would have ultimately developed that that was so. Now, that is your witness who says it was ours, or thought it was ours and tried to hide it away.

Mr. Williams: It was not disclosed until 1929, when he testified. That is the first anybody knew about it.

Mr. Richey: Well, nobody knew about it until 1920 out at Joplin.

Mr. Williams: No, not of the fact that he did it in 1916, no.

I will introduce this Exhibit 129 in evidence—you may take the witness.

RE-DIRECT EXAMINATION by Mr. May.

Q. You were asked, Mr. Downie, by Mr. Williams, if you had made any inquiry anywhere as to this Joplin contraption and use, and you stated that you had from persons that came from Joplin to your plant. And then you were asked what was the nature of the information you obtained, and you answered it in general. Can you tell us the names of any person, and what information such person conveyed to you was? A. In general, as I have said, it was corrective as to the place and as to the time, and confirmatory of Hazen as to the machine, in a general way, consisted of—

Q. What do you mean by "corrective of the place and the time"? A. I think Mr. Hazen advised me in 1921 that this work was done in Carthage, Missouri, rather than at Joplin, and that the time had been earlier by some two years or thereabouts than later appeared to be the fact. And in my report to Mr. Siggers, I so advised him of that same thing. Now, as I went along talking to other individuals as they came in from Joplin, in the course of the next two or three years, I learned, as I say, the fact about those two things and some details as to construction and use; one that I recall I learned from Mr. Oliver, and I think from one other of the Joplin men, and that was as to the use of the bucket, that they had great difficulty in getting the spoil out, or getting the bucket dumped, and Mr. Oliver told me that the final form of latch release mechanism was one in which the teamster was required to carry a club with him on the seat of the wagon, and when the bucket was brought over the wagon for discharge, the teamster stood up on the wheel of the wagon and struck a certain point on the back of the bucket, or on the latch of the back of the bucket, to release the load, and then jumped from the wagon, because, of course, of the gravel or clay spillage. He also confirmed as to being the two main difficulties in operation, that they had trouble getting the bucket shut and getting it to stay shut, and then getting it open, because of the flexure in that body and the mounting of the bucket, the general lack of rigidity, etc. Mr. Hazen, and I think Mr. Oliver, were in agreement as to the skimmer

having been used to complete the excavation. I think that the other fellows did not remember that—Phil Culbertson, and one or two others. The different individuals gave me different estimates as to how much had been dug, and of course they had varying impressions as to the degree of bothersomeness, and difficulty encountered in the use of the first Clutter ditcher, that is the Leroy Clutter ditcher, that was used for the first part of the excavation.

Mr. Corbett: Your Honor, this is all hearsay, and some of these witnesses have been on the stand and testified in this case.

The Court: Well, he has gone over it. I guess he is about at the end of it now, anyhow, aren't you, Mr. May?

Mr. May: I have just one other question.

Q. I show you Exhibit 27 of the defendant, and ask you what that is? A. This is a letter written by me to Bern Clutter, dated February 20, 1926.

Q. And that is an exhibit in the case here, is it? A. Exhibit No. 27, defendant's exhibit.

Q. Is that after the affidavit of April 17? A. Yes, sir, after Clutter's affidavit. It is an inquiry of him to find out whether he used side rake teeth.

Mr. Williams: I think that will speak for itself.

The Court: Well, of course, that is always so, that a letter speaks for itself, unless there is a point as to abbreviations or code or something like that.

Mr. May: That is all, Mr. Downie.

RE-CROSS EXAMINATION by Mr. Williams.

Q. Mr. Downie, Mr. Oliver is still alive, isn't he? The man you speak of? A. Mr. Oliver is at the Joplin plant.

Q. Of the Keystone Company? A. Of the company.

Q. Mr. Theodore Smith is still working for you, isn't he? A. Yes, sir.

Q. Where is he located? A. He is located at Beaver Falls.

Q. What is his position? A. He is treasurer of the company.

Mr. Williams: That is all, I guess.

Mr. Corbett: Your Honor, Mr. Fay is here from Cleveland, and he is a very short witness—he is a patent attorney, and we would like to put him on now.

The Court: All right. Any objection to Mr. Fay being put on?

Mr. Richey: None whatever.

HORACE B. FAY, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Corbett.

My name is Horace B. Fay. I am 43 years of age. I reside at Shaker Heights, Ohio. I am a patent attorney. I am the Horace B. Fay who was attorney for the Byers Company, in the recent litigation between the Keystone vs. Byers.

Q. In the motion to produce certain papers in this case, a brief was filed by the plaintiff, dated January 3, 1931, and in that brief appeared the following statement: "We further say that since this matter came up, Mr. Richey has talked to Mr. Horace Fay, who conducted the defense in the Byers case, and that Mr. Fay has advised him that he was informed of this Joplin experiment and Joplin machine as early as March, 1929, through a party who gave his name as Bernard Ross, and who offered to sell the information for five thousand dollars or more. Mr. Fay reports that he reported the matter to Mr. Shaffer, one of the officers of the Byers Company, and that he is informed that Mr. Shaffer made some investigations regarding the Joplin experiment and machine, but that nothing came of it. We further say that we have learned from other sources that Bernard Ross was the name which Bernard Clutter was giving as an alias in certain negotiations that he was making for the purpose of selling the information which he has given in his deposition in these cases. It is irresistible to conclude that either Mr. Shaffer and Mr. Fay agreed with us that the Joplin experiment and machines were immaterial, or that they came to the conclusion that Mr. Clutter was simply another one of those persons who, on learning that the patent has been sustained, seeks opportunity to make some money by selling information, either fabricating or greatly exaggerating the prior work of somebody."

Will you please state whether or not you agree with that statement of your knowledge and what transpired in any conversation that you may have had with Mr. Richey? A. I would rather state just what occurred, than whether I agree with the statement or not.

Q. Well, state what occurred? A. I think the District Court's decision in our case was given some time in January, 1929. Very late in February, or very early in March of that year, a person called up the Byers Machine Company, who gave his name as Bernard Ross, and said that he had information for sale for a large sum of money, which would invalidate the patent involved in our suit. I have forgotten who was the president at that time, but I think it was Mr. Baker. He has that man telephone me, and then Mr. Ross did, and repeated that same statement to me, asking me if we were interested, and I said we were interested in talking to him, would he come to see me. He didn't come to see me, and he said he was going to New Jersey and would be back through Cleveland within a week. I think he said he was going to Asbury Park, N. J. I heard nothing further from him at all, and within a few days or a week, I sent him a telegram, which was undelivered, and I never heard anything more from this Bernard Ross.

About some time in December last Mr. Richey called me up and said he was coming to see me. When he came he said that this litigation had got to a point where the parties were throwing mud and making charges regarding some suppression of evidence. He asked me if I didn't know all about the Joplin use. I knew nothing about the Joplin use, and I knew so little about what he was talking about that it took me several minutes before it occurred to me that we had had this offer from this Bernard Ross. I told Mr. Richey about that and he said, "That is the same fellow"; that his name is Bernard Ross Clutter; he made you that offer, and then he made that same offer to other people. I did not know anything about the Joplin use, or the Joplin use by Bernard Clutter, and I have never heard before nor since about Bernard Ross.

Q. Did Mr. Bernard Ross, or Bernard Ross Clutter, tell you over the phone any of the nature of the development that he had, or information that he had? A. No, he was very indefinite, and merely said that he had evidence which would invalidate all of the patents involved in our suit.

Q. And when did you first obtain information as to the nature of this development, this Bernard Clutter development? A. From the depositions and the testimony given in this case here, through Mr. Wilson of our office, who has been present.

Q. And it was at the time Mr. Wilson was present during the actual trial when the depositions were read; is that correct? A. Yes, sir.

The Court: Did this man phone you before the decree went on in the Byers case in Cleveland, or afterward?

The Witness: I think it was after it went on.

Mr. Corbett: That is all.

Cross Examination by Mr. Richey.

Q. When I came into your office and told you that this litigation had gotten into the mud slinging stage I asked you if you knew about this Joplin experiment, didn't I? A. Yes, sir.

Q. And you went on and told me about this Bernard Ross matter? A. As soon as it occurred to me, I told you about that, yes, sir.

Q. And you did not say at that time that you did not know that Bernard Ross was connected up with the Joplin experiment, did you? A. I knew nothing about the Joplin experiment.

Q. In answer to my request as to whether you knew about the Joplin experiment, you replied by telling me about Bernard Ross? A. As soon as I recalled it, yes, sir.

Q. Well, you also said that you had turned the matter of looking into it over to Mr. Shaffer, didn't you? A. I think I was incorrect about that, because I think Mr. Baker was the president of the Byers Company at that time. I told him about it, yes.

Q. But you told me that you had told Mr. Shaffer—whether you are right or whether you are wrong in remembering it was Mr. Shaffer or not—you told me that it was Mr. Shaffer that you did turn it over to? A. No, I didn't put it that way. I said this man had called me and Mr. Shaffer, but I think it was Mr. Baker, and I said that we did nothing more about it because we didn't know where Bernard Ross was or how to reach him.

Q. Didn't you tell me you left Mr. Shaffer to investigate it? A. I say, I knew nothing further about it.

Q. I am trying to find out what you told me. A. I don't recall whether I just made that statement or not.

Q. Well, that is my recollection of it, that you said you had taken it up with Mr. Shaffer and you left it to him to look into. Now, can you say that you did not say that? A. I may have said that; I don't know.

Q. Now, did you tell me at that time that you had been informed later on that Mr. Shaffer had made some investigation? A. No.

Q. You are certain you didn't tell me that? A. No, sir.

Q. I am not asking you whether he did or not, but I am asking what you told me? A. No, sir.

Q. And if I say you did tell me that, why you deny it, do you? A. Well, I don't think I said that.

Q. Well, you think you didn't tell me that; you have no recollection positively one way or the other on that? A. I am quite sure I didn't.

Q. If I say you did say it, you won't deny it, would you? A. Yes, I would.

Q. Because I made this memorandum directly after leaving you. Now, do you deny that you said at that time that this offer had been for $5000 or more? A. It was a large sum of money and I cannot be positive of the amount.

Q. Well, you mentioned the sum of $5000, didn't you? A. Well, I think it was that or more. I couldn't say the exact amount.

Q. You kept no note of the conversation, did you? A. No, sir.

Q. You still represent the Byers Company in that case, don't you? A. Yes, sir.

Q. Has there been a combination of the infringers of this patent to defendant part of the case, to your knowledge? A. Not to my knowledge.

Q. Has there ever been any to defend the accounting in Cleveland in the Byers case? A. No, sir. In fact, we have been refused information repeatedly by Mr. Corbett, and assistance by him in the last six months.

Q. Your firm is one of the oldest patent law firms in Cleveland, isn't it? A. Yes, sir.

Q. Have been practicing there for a number of years, haven't they? A. Yes, sir.

Q. You conducted the defense of the Byers case from beginning to end, didn't you? A. Yes, sir.

Q. Your firm is in court almost constantly in patent infringement litigation, isn't it? A. We are in court most terms, yes.

Q. And you had had considerable experience in the prosecution of patent infringement suits before you took up this Byers case, hadn't you? A. Some.

Q. You consulted with your associates regarding this Byers case from time to time in the preparation and trial of it? A. Yes.

Q. You employed Mr. Wadsworth as your expert, didn't you? A. Yes, sir.

Q. You had employed him in a number of patent infringement suits before, hadn't you? A. Yes.

Q. He is a well established and recognized patent expert of ability, isn't he? A. I think so.

Q. Now, you attended all the hearings and all the depositions in the Byers case, didn't you, yourself? A. I think so.

Q. You examined all the witnesses at the trial of that case? A. Yes, sir.

Q. And you prepared the brief in both courts and argued the case in the Court of Appeals? A. I assisted in preparing the briefs.

Q. And you argued the case in the Court of Appeals? A. Yes, sir.

Q. You were present at the demonstration attended by Judge Westenhaver? A. Yes, sir.

Q. You and Mr. Wadsworth both were there? A. Yes, sir.

Q. You knew about the use of the Mahoney machine before you tried the Byers case, didn't you? A. I was told about it.

Q. And you didn't look into it? A. Personally, no.

Q. Did you have anybody look into it? A. Mr. Shaffer of the Byers Company.

Q. And I suppose you didn't think it was worth taking—you didn't take it, anyway? A. I have forgotten just what our reason was for not taking any depositions in regard to it.

Q. You considered the defense in the Byers case was well conducted, don't you? A. From the result, no.

Q. Well, you did the best you could on it, didn't you —you and Mr. Wadsworth? A. Yes, sir.

Q. And you gave the same kind of services you would give in other cases? A. Yes.

Mr. Richey: That is all.

Re-Direct Examination by Mr. Corbett.

Q. Mr. Fay, my recollection is that I talked with you once about the Mahoney device, and that you told me

that you had had the Mahoney patent under consideration, and that your Mr. Beckwith was to investigate the matter for your company, and they were unable to locate Mahoney; does that accord with your recollection? A. I don't remember whether they didn't locate Mahoney, or whether they located the machine or something about it, but not the man personally. I have no recollection on it.

Mr. Corbett: That is all.

Mr. Richey: That is all. I want to make a statement to Your Honor that the part of my brief that Mr. Corbett read was recorded by me directly after I left Mr. Fay's office, and it was my recollection of the conversation—the language that Mr. Corbett read to Mr. Fay. He agreed with me on most of the points, but there are one or two things upon which our recollection differs. The brief is dated in January, and it is my recollection that it was rewritten. I think Mr. Fay was right about the date in December, and I dictated it when I got back, and then it was rewritten. I have no doubt Mr. Fay stated his recollection correctly, and I know I am mine.

PHILIP E. SIGGERS, a witness called by plaintiff, being first duly sworn testified as follows:

DIRECT EXAMINATION by Mr. May.

My name is Philip E. Siggers. I live in Washington, D. C. I am 37 years of age. I am a patent lawyer. The first time I came in contact with any one connected with the Keystone Driller Company was on July 24, 1925. I was then an associate with the firm of Emory, Booth, Janney & Varney, whose offices were in Chicago, Illinois; I was then under Mr. Janney who was in charge of that office. The circumstances under which I met the Keystone Driller Company is as follows: My late father, E. G. Siggers, came to Chicago to place certain litigation in the hands of Mr. Janney, or in the hands of that office for which I was working. He arrived on that morning of July 24, 1925, and met at the office Mr. Rex Downie, and we had an all day conference with one or two others present, and during that conference all of the facts then known to Mr. Rex Downie about the Joplin experiment were fully outlined. The two exhibits consisting of the affidavit of Herbert H. Wallower and

Bernard R. Clutter were exhibited to Mr. Janney and myself, and they were discussed. And I can identify those exhibits as being at the office at that time. I recall the discussion and conversation that took place at the conference. In the first place, it was an all day conference, attended by five or six men, and it was the first time that my father had attempted to deliver to that office a litigation or any sort of work which he hoped I would play some part in. I was then in Chicago, and he was in Washington, and he wanted me to play some part in this litigation, and so it made a very strong impression on me. And the particular thing that perhaps most strongly impressed me during the conference was the fact that in the course of the consideration of the data then available concerning the Joplin experiment, Mr. Janney rose up from his seat and said that he thought that he might—

Mr. Williams: Just a minute. Now, what is the purpose of this testimony?

The Witness: If you will let me go on, you will see, Mr. Williams.

Mr. Williams: Just a minute—I am talking to the court.

The Witness: Pardon me.

Mr. Williams: If he is dealing with information that came to Mr. Janney, upon which Mr. Janney made his determination, that is one thing—and the only thing, it seems to me, that is here admissible.

The Court: Well, the theory of the plaintiff's knowledge or advice is admissible. I guess that is what this is for.

Mr. May: That is what I am coming to.

Mr. Williams: Well, I don't think motions and so on the court is concerned with. Just what was said and what he was told.

The Court: That is what he is going to tell.

Mr. Williams: Well, he has a long way getting to it.

The Court: Well, let's get at it, then.

The Witness: Shall I finish my narrative?

The Court: Yes.

The Witness: Mr. Janney said that he was inclined to recommend that all the facts of this Joplin experiment be laid before the court when the case came up for trial.

The Court: Do you want that stricken out, Mr. Williams?

Mr. Williams: No, I think I will let that stand.

The Witness: (Continuing.) However, that it was a tentative conclusion, subject to change after he had gone deeper into the matter. And Mr. Rex Downie, who was present during the entire conference, immediately said that the Keystone Driller Company did not want to lay any obstacles in such a course if counsel advised that that was the wisest course; that they would follow precisely whatever course was advised by counsel, and they would be perfectly willing to lay all the facts before the court. That same thing happened again in the second conference, in January, 1926, in the same office.

I can identify Plaintiff's Exhibit 273 and Defendant's Exhibit 113 as the exhibits to which I referred as having been shown at the first conference in Mr. Janney's office. As to whether litigation was begun by this firm of Emory, Booth, Janney & Varney, I will say that suits were brought in December, 1926, against the Byers Machine Company and the Bay City Dredge Works. This firm continued in charge of these suits until the time of my resignation from the firm, which was effective February 1, 1927, and at that time it was understood between Mr. Janney and me that each was to handle the work of his own clients in the future.

I moved to Washington on February 9, 1927, and shortly thereafter I went to the plant of the Keystone Driller Company, probably around February 16th or 20th, and saw Mr. Rex Downie and other officials of the company, and I advised them very strongly to employ counsel who would act in a senior capacity in the suit in Cleveland, and I was instrumental in having Mr. Richey called up, and we arranged for an interview the next day, and Mr. Rex Downie and I went there the next day and laid the general facts of the case before him. I can fix that exact date by reference to a diary I keep, but I would have to wire for the data.

The Court: Was it before this Cleveland suit was filed?

The Witness: The Cleveland suit was filed along the latter part of December, 1926.

The Court: This was before that?

The Witness: This was after. This was in February, 1927, after the suit was filed, but before anything had been done.

(Narrative continued.) The result of this conference in Cleveland was that Mr. Richey and his firm were retained to prosecute the litigation against the Byers Company as senior counsel. The entire case was laid before Mr. Richey in a more or less sketchy way at the conference, and repeatedly thereafter and in numerous conferences details of the entire case, and particularly the Joplin experiment were fully revealed to Mr. Richey. The two affidavits, Exhibits 73 and 113, were submitted to Mr. Richey at the first conference, but if not the first, it surely was the second conference, which followed within a week or two.

I recall very definitely two conferences in Beaver Falls which are pertinent, one before we went to see Mr. Richey, and a conference which was attended by myself, Mr. Rex Downie, his brother Vail Downie, and Mr. Robert Patterson, at which this Joplin experiment was considered, and what the company was to do about it.

The Court: That was before your letter was written to B. C. Clutter and to Wagner?

The Witness: A long time before; before we went up to see Mr. Richey at Cleveland. I remember very distinctly a very late afternoon conference that was attended by these men.

(Narrative continued.) As to the attitude of either of Messrs. Downies at this conference—why, the attitude of every man present was precisely what it had been in previous conferences, namely that the Keystone Driller Company was perfectly willing to lay the facts of this Joplin experiment before the court if counsel advised that that was the wisest thing to do. And in a later conference, which was in 1929, attended by Mr. Robert Patterson, Mr. Vail Downie, Mr. Rex Downie, Mr. May—that is, yourself—and myself and Mr. Richey, the same thing was threshed over again, and the same conclusion.

The second conference with reference to the letters that the court asked about, the letters to B. C. Clutter and George B. Wagner, was before that, very shortly before when those letters were sent. I hadn't seen those letters personally, so I can't tell exactly when but I feel sure it was before those letters were sent. I remember what occasioned the conference. The company was considering the question of licensing various companies, in-

cluding the Star Driller Company, and other questions, with reference to the progress of the litigation, and so on. At the time of the meeting the details of the meeting with B. C. Clutter and George E. Wagner were told us verbally, that is, the people who were assembled, by Mr. Rex Downie. That is, the proposition that had been advanced by George E. Wagner was laid before the assembly and was considered by the entire group of men in that room. And the conclusion was reached to write the letters which are exhibits in this case to which I have referred.

Mr. May: That is all.

CROSS EXAMINATION by Mr. Williams.

At the first conference in January in Mr. Janney's office there was present besides Rex Downie, my father, myself and Mr. Janney, Mr. Dan Holmes, who is head of the Waukegan, Illinois office of the Keystone Driller Company. He was present during the entire conference, and he was here, incidentally, during the early part of the trial. The details of this whole situation with reference to the development of these patents, were given to this conference, as then understood.

Q. As then understood? A. Yes, sir.

Q. Well, I suppose they couldn't be given in any other way except as then understood, could they? A. Well, all the details of Mr. Downie's—Mr. Downie's knowledge has progressed, you understand, as he has gotten in the facts.

Q. Well, of course he could not have told you a year ago of something he learned just yesterday. A. That is correct.

Q. So that all the information you got at that conference, you got from these two affidavits— A. No.

Q. Well, just let me finish; if I am wrong, you can supplement it. All the information you got was from these two affidavits and from Rex Downie, or, if not, what other information did you get?—A. Well, that is, strictly speaking, correct, although Mr. Downie did make sketches and showed certain parts and so on, so as to make perfectly clear what his knowledge was.

Q. Well, now, listen to the question—I asked you if you got the full information at that conference from Mr. Downie and from these two papers and if not, from what other source? A. That is correct.

The Court: Was this agreement, Exhibit 98, shown to you?

The Witness: I don't remember of seeing that until a year or more afterwards. I don't remember of seeing it.

The Court: Well, when was that in the progress of the Cleveland litigation?

The Witness: With respect to the Cleveland litigation? It must have been shown before the trial; I feel sure it must have been before the trial, but I cannot say when. We had a large number of conferences. I was up there two or three times a month, two or three times a month up in Cleveland conferring with Mr. Richey and Mr. Downie. Just when that was shown, I can't say.

Q. You think it was about a year after this conference you had in Mr. Janney's office, which was on July 24, 1925? A. It may have been nine months; I couldn't say.

Q. But you did not see it at that time? A. I did not see it in the first conference.

Q. And you say at that time Mr. Janney said he was inclined to recommend laying the whole matter before the court, and you all agreed, did you not? A. Agreed to what?

Q. Agreed to that advice. He said he was inclined to so advise. Now, did the rest of you agree, or disagree? A. Mr. Janney was to be employed as senior counsel. Mr. Rex Downie was to take and follow his advice fully, and of course I was entirely willing to follow his advice.

Q. Well, then the answer is yes, isn't it? A. Yes.

The Court: Did you ever learn, Mr. Siggers, at any of these conferences, that some part of $3400 had been paid for the Bern Clutter affidavit, Exhibit 113?

The Witness: Why, I learned that there was a credit contingent upon—there was to be a contingent credit, and also an immediate credit, yes.

The Court: Did you know what that was likely to amount to?

The Witness: I was told it was—each credit was one-fourth of the cost of a machine—yes, I knew what it amounted to. I knew that the machine sold for between seven and eight thousand dollars, yes.

The Court: This first agreement, Exhibit 98, was not shown to Mr. Janney, then?

The Witness: Not that I recall. There were only two conferences with Mr. Janney. They were both very

long conferences. One was in July, 1925, and the other early in January, 1926, and I do not recall that that agreement was ever shown to Mr. Janney. If it was, it has simply passed out of my mind, that is all.

(Narrative continued.) Mr. Janney never definitely advised that the matter be laid before the court. At that second conference he said again that it might be a wise thing to do, however, that he was reserving judgment, and he never finally decided that matter one way or the other, or for that matter, any matter connected with the suit. The next general conference to which I referred was the one when I went to Cleveland and had a conference with Mr. Richey and Mr. Downie and that was in February, 1927. At that time I laid before Mr. Richey the two affidavits, one by Clutter and one by Wallower. I cannot remember laying before him at that time this Exhibit 98 or so-called memorandum or contract. In fact, if I remember correctly, the original agreement was in the possession of Mr. Downie and was brought out in one of those early conferences, but not during the first conference. As to when Mr. Janney saw it, I feel reasonably certain that Mr. Janney did not see it. I am positive that Mr. Richey saw it, but I can't say when. As to whether we came to the conclusion at this conference that this matter should be submitted to the Court, I would say that we came to the conclusion that in the first place, let me make it perfectly clear that the firm of Emory, Booth, Janney and Varney came to the conclusion that the Joplin experiment was an abandoned experiment, or otherwise they would not have brought the suit. The reason I said a few minutes ago that Mr. Janney never arrived at a conclusion—

Q. Well, now, just a minute; answer the question.

The Witness: I want to make this clear, Your Honor.

Mr. Williams: Well, answer the question.

The Court: If you want to explain your answer, that is all right.

Mr. Williams: Just answer the question first, and then explain it, and we will save time.

(Last question read)

A. No, no such conclusion was ever arrived at during any conference that I ever attended.

The Court: That is, with Mr. Janney.

The Witness: Mr. Janney or anybody else.

The Court: As I understand your testimony, the effect of it is that Mr. Janney gave an opinion which tentatively leaned toward submitting it to the court?

The Witness: Yes, sir.

The Court: And that he never—his connection with the case was severed before he ever changed that opinion?

The Witness: That is correct, Your Honor.

Q. Now, then, was that opinion expressed then in the conference with Mr. Richey? A. I told Mr. Richey Mr. Janney's tentative conclusion, and Mr. Janney never saw Mr. Richey in connection with this suit.

Q. Just answer the question, please?

(Last question read)

A. Expressed by whom?

Q. Why, Mr. Richey and all of you, or by those participating in the conference? A. You mean, was the opinion that the whole matter ought to be laid before the court—

Q. Yes; what decision did you come to, or did the conference come to, on that subject? A. We came to the conclusion that the Joplin experiment was an abandoned experiment and it was not worth while to bring it to the attention of the court.

Q. So the conclusion was reached then that you would not bring it to the attention of the court? A. Yes, sir.

Q. Now, then, you said that after that you had two conferences at Beaver Falls, as I have it in order of time. A. After what?

Q. After the first conference with Mr. Richey in Cleveland? A. No, we had one before.

Q. Well, all right; I have got my notes in order here, that your conferences were first with Janney, and then the conference with Mr. Richey in February, 1927, and the statement to him, and then my notes show after that two conferences at Beaver Falls? A. No, you are mistaken, Mr. Williams.

Q. Well, I am telling you what my notes show in order. Now, when were those two conferences held in Beaver Falls? A. There was a conference at Beaver Falls attended by myself, Mr. Rex Downie, Mr. Vail Downie, and Mr. Robert Patterson, and that was before we went to see Mr. Richey. And then there was another one afterwards.

Q. I have in my notes here, at that conference the company expressed its willingness to lay this Joplin matter before the court? A. That is correct.

Q. You so said, did you not? A. Yes, that is correct.

Q. Then you had a conference with Mr. Richey, and then you had a second conference at Beaver Falls; is that right? A. We had a great many conferences with Mr. Richey.

Q. Well, you said two conferences at Beaver Falls, and one with Mr. Richey. Now, put them in order any way you want to. I am trying to get them in order. A. Well, I am trying to help you; we had a great many conferences.

Q. Well, you spoke about the first conference with Mr. Richey? A. Yes, sir.

Q. Before that you had had a conference at Beaver Falls, with Rex Downie, Vail Downie, Patterson, and yourself? A. Yes.

Q. And then after your first conference, then you had your conference with Mr. Richey in Cleveland you now say? A. Yes, sir.

Q. And then after that you had a second conference at Beaver Falls? A. Yes, a long time afterwards.

Q. How long afterwards? A. In 1929.

The Court: After the Byers suit had been filed in Cleveland.

Q. All right, I have in my notes that Rex Downie—

The Court: We will not follow your notes; evidently they are wrong.

Q. I don't think they are. I have the note, you said again at that conference you came to the same judgment, to submit the matter to the court.

Mr. May: There is one interview with Mr. Richey between those two Beaver Falls conferences?

The Witness: I would answer, but he won't let me.

Q. All right. After the second conference in Beaver Falls, did you or did you not say a while ago that you came to the same conclusion, that the company was willing to submit this Joplin matter to the court? A. No, we didn't come to any conclusion.

The Court: That case had been decided then, in Cleveland, hadn't it?

Mr. Williams: He said two conferences, and he has not said—has not set the time, but as to each it was that

they came to the same judgment, so my notes show. And I am trying to find out.

The Court: Well, as my notes go, and I don't guarantee them, Mr. Richey went up to Beaver Falls once, and that was after the case was decided, and it was prompted by the payment of B. C. Clutter and George Wagner to get a license. They said it was immediately prior to April 12, 1929, and the Byers case was decided by Judge Jones on January 23, 1929.

Q. Well, I will get at it this way, then: At this conference, the second conference that you spoke of in your direct examination at Beaver Falls, in which there were present Patterson, Rex Downie, Vail Downie, yourself, Mr. May and Mr. Richey, did you at that conference take up the question as to whether this Joplin matter should be submitted to the court? A. That was briefly discussed, and the company officials then present again said that they would be entirely willing if counsel advised, to lay this matter before the court.

The Court: Well, you mean after the case was closed in Cleveland?

The Witness: Well, we had other litigation, Your Honor; we had pending three suits.

The Court: You mean you discussed the advisability of disclosing this matter in subsequent litigation?

The Witness: Yes.

The Court: Subsequent to the Cleveland case?

The Witness: Yes, because we said all along that sooner or later all these facts would be known. They could not be suppressed; a dozen people knew them.

The Court: That straightens it out, doesn't it?

Mr. Williams: That straightens it out, yes. That is what my notes show. I had an awful time getting him to agree to it, though.

The Court: But you made one mistake, Mr. Williams.

Mr. Williams: I will try to rectify any mistakes.

The Court: You remember what the judge's notes were in Pickwick Papers?

Mr. Williams: I am afraid I don't.

The Court: Well, there was no appeal from them.

Mr. Williams: Well, I am just trying to find out if he agreed with my notes, and I now claim that he does.

Q. Well, now, the next question is, if the company officials expressed their willingness to abide by the judgment of attorneys or counsel, what was the advice of

counsel on the subject? A. The advice of counsel—you mean by Mr. Janney and mine, and Mr. Richey?

Q. Well, I understand Mr. Janney first said he was inclined to do it. Now, we have got that. A. I started to explain a few minutes ago, and you cut me off.

Q. All right, now go ahead. A. You see, Mr. Janney—you will pardon me for explaining a few things in advance, and not cutting me off. Mr. Janney was out of the city a great deal of the time. This suit dragged along for a year and a half, and finally I got desperate to get the case pressed, and the Keystone Driller Company were most anxious to bring the suit, and Mr. Janney turned the suit over to Mr. Dowell, and Mr. Dowell, who was the next senior man in the firm, and Mr. Dowell went into this matter then, Mr. Osgood H. Dowell; I laid the entire matter before him, and after going into the matter thoroughly, as Mr. Janney's right hand man, decided that the Joplin experiment was an abandoned experiment, and that we should bring the suits, which we accordingly did. He prepared the bills of complaint, and upon Mr. Janney's return from one of his extended trips, they were finally approved, and they were filed in December, 1926, the three suits.

Q. Have you finished with that? A. Yes, sir.

Q. I thought you were going to comment on the subject, not of bringing the suits, but whether this Joplin matter had been agreed upon? A. I brought out the fact that Mr. Osgood H. Dowell passed on that matter in Mr. Janney's firm, and that Mr. Janney's counsel finally abandoned that matter.

The Court: He just expressed that tentative opinion.

The Witness: And then let it go.

The Court: As far as he was concerned, it floated downstream?

The Witness: It floated downstream finally.

Q. Do you know what information that Mr. Dowell had that Mr. Janney did not have, that led to this change of opinion? A. There wasn't any change of opinion. Mr. Dowell agreed that we had a good case, agreed with my conclusion that we had a good case, and we decided to file the suit.

Q. I am not talking about filing the suit. I am talking about bringing the Joplin matter to the attention of the court. Now, you said Mr. Janney expressed the opinion tentatively, subject to reversal, that that should be done, didn't he? A. Yes, sir.

Q. Now, then, you say subsequently Mr. Dowell, or McDowell,—what was his name? A. Dowell.

Q. Came to a different conclusion, that it should not be submitted to the court; is that correct? A. No, he never came to a conclusion.

Q. Well, did you ever submit it to the court? A. No.

Q. Well, then, did you fail to submit it, without thinking about it, or coming to any conclusion about it? A. No, you see, Mr. Williams, all that was ever done in the firm was the filing of these bills of complaint. That is absolutely all that happened. After that I got out of the firm and went to Mr. Richey. Mr. Dowell passed completely out of the picture, and whatever his final conclusion may have been, never came to light. I don't know what his final conclusion would have been if we had gone on with that. I know that he agreed that it looked like an abandoned experiment to him, otherwise he would not have brought the suit.

Q. I am not asking about the bringing of the suit, and I am inquiring about the Joplin matter. I am simply trying to find out when and how and for what reason counsel's opinion as to whether the Joplin matter should be brought to the attention of the court was changed. Now, can you tell me that? A. I am not aware that it ever was changed.

Q. Well, let's start with A, B, C and D. Mr. Janney expressed the opinion that he would expose it to the court, didn't he? A. He said that, subject to possibly change of opinion after he got deeper into the matter.

Q. Well, all I am asking is, what happened to change that opinion. I understood you to say the rest of you attorneys at the conference agreed with his expression of opinion. Is that correct? A. There was only one other attorney present; that was myself.

Q. Well, your father was there? A. Yes, that is correct. At the first conference, not at the second.

Q. Well, that opinion was expressed at the first conference, wasn't it? A. Yes.

Q. And Mr. Rex Downie was there, wasn't he?

Mr. Richey: Mr. Downie isn't an attorney.

Q. No. Well, Mr. Rex Downie, who was not an attorney, was also there; is that correct? A. That is correct. He was there at both of them. He has been at every conference.

Q. Now, then, I will ask you again—as I understand it, you and your father and Mr. Downie agreed with Mr. Janney. If you didn't, did you disagree? A. I and my father and Mr. Downie agreed with Mr. Janney, you say?

Q. Yes, in that expression of opinion as to whether the Joplin matter should be brought to the attention of the court? A. My father never said that in his opinion it should be brought to the attention of the court. He said all along it was an abandoned experiment, and stuck to his original conclusion.

Q. Then he did not agree with Mr. Janney? A. He neither agreed nor disagreed.

Q. He just said nothing; is that right? A. No, he didn't say nothing. He said in his opinion it was an abandoned experiment, and it was not necessary to call it to the attention of the court.

Q. Well, then he said it wasn't necessary? A. That is correct.

Q. Now, what, if anything, did he say as to the advisability or not, then? A. Well, he didn't—if I remember correctly, he didn't think it was advisable because it was an abandoned experiment. That is the best of my recollection.

Q. That "abandoned experiment," I have heard that so much and read it so much, I am getting a fixed idea on it. A. I can't remember his exact words.

Q. Well, did you agree or disagree with Mr. Janney's opinion at that time, at that conference? A. Why, I was perfectly willing to follow Mr. Janney, that it might be best to call it to the attention of the court, at first.

Q. Well, now, when did you change your opinion? A. Why, after I got into it deeper and got more facts from Mr. Rex Downie and learned more about the case, we decided that we had a good case and that we should go ahead, and that there was no need of bringing the matter to the attention of the court.

Q. Well, now, I wonder if I can get you to separate those two ideas. Even Mr. Janney, when he thought it might be advisable to lay the Joplin matter before the court, was considering bringing the suit, wasn't he? A. He surely was.

Q. And he didn't expect to lay the matter before the court unless he did bring the suit, did he? A. No.

Q. He didn't expect to bring the matter before the court until he had actually brought the infringement suit, did he? A. That is correct.

Q. All right. Now, then, assuming that you had concluded you had a good case, which you could lay before the court, when did you change your mind as to the advisability of exposing this Joplin matter to the court? A. Why, I spent a lot of time looking up law during the years 1925 and '26. I had a lot of time to look up a lot of law. I can't say when I changed my mind, but I know I changed it.

Q. Well, did you change your mind before or after you saw this contract of April 11, 1925? A. I changed it a long time before I saw the contract.

Q. So seeing the contract had nothing to do with it? A. No.

Q. Well, now as I understand you, at the first conference—oh, no, I guess that is right. Your statement was that the officials of the Keystone Driller Company were willing to abide by the decision of counsel as to whether or not this matter should be brought to the attention of the court? A. Yes, sir.

Q. So presumably they didn't change their mind at any time on that; never changed this mind; counsel changed their mind? A. No. I said I was perfectly willing to follow Mr. Janney as my undetermined conclusion, but I have also said after I looked into it deeper, I came to the conclusion that it was an abandoned experiment. I have never changed my mind; it was rather a growth of mind, rather than change of it.

Q. Well, all right, but I am trying to find out, when did you change your opinion as to whether it should be submitted to the court? A. I didn't change my opinion.

Q. Then the tentative opinion you agreed with of Mr. Janney was not an opinion?

The Court: The way I understand that, Mr. Williams, Mr. Janney was the guiding star of that litigation, so far as Mr. Siggers was concerned, and it wasn't necessary for him to take any position.

Mr. Williams: He said he agreed with him.

The Court: No, he said he agreed to go along with Mr. Janney because he was the chief counsel.

Mr. Williams: Well, I didn't quite understand it so.

The Court: And that afterwards the occasion arose where he had to make up his own mind, and then he gradually came to the conclusion that this was an abandoned experiment, and probably abandoned to such an extent that he thought it should not be laid before the

court. That is what I understood this witness' position.

Q. Well, Mr. Janney thought it was an abandoned experiment, didn't he? A. Mr. Janney thought it was an abandoned experiment, but wasn't sure of all the facts. He had not looked into it; he had only the facts there that Rex Downie had brought, so there weren't enough to come to a final conclusion, until he had talked with witnesses and so on.

Q. Even so, but at the time he expressed that opinion, he thought it was an abandoned experiment, didn't he? A. Didn't say.

Q. You didn't hear him say what he thought about that? A. No. He didn't arrive at any final conclusion, Mr. Williams. I can't say whether he thought it was an abandoned experiment or not. He didn't tell me.

Q. Well, when did the attorneys decide, or counsel decide; not to bring this Joplin matter to the attention of the court? A. Well, that final decision was made in the office of Richey & Watts, Cleveland, during one of our numerous conferences there, and by "us," I mean conferences between Mr. Rex Downie and myself and Mr. Richey.

The Court: Well, was it prior to—

The Witness: Prior to the bringing of the suit—I mean prior to the trial of the court.

The Court: Prior to the trial of the Byers suit?

The Witness: Yes, sir. Some time possibly March, 1927, or late February, 1927, and September, 1927, when the case was argued. Some time before June; I can even date it closer than that, because the case came very near being tried in June of 1927.

Q. The depositions of Bernard Clutter were taken in February, 1930, weren't they, about? A. Yes, sir.

Q. And at that time this contract was brought to light, was it not? A. I believe so. I did not attend that deposition.

Q. How long before the taking of that deposition did you know about this contract? A. I must have known of that contract, socalled contract, some time in the spring of 1927. In fact, I am positive I did.

Q. And that came to the knowledge of all counsel in the case at about that same time? A. Mr. Richey and myself, yes.

Mr. Williams: All right, that is all.
The Court: Anything further?
Mr. May: Not of Mr. Siggers.

Rex R. Downie, a witness called by Plaintiff, being first duly sworn testified as follows:

Direct Examination by Mr. May.

Q. In explanation of calling Mr. Downie, I had inquired of him only as to the two affidavits, because the agreement itself has no statement of facts referring to the Joplin matter. So since that has been brought into the case by the court, I want to ask Mr. Downie to whom and when did you exhibit this Exhibit No. 98, is it?

The Court: 98, yes.

A. That is the memorandum, and what was there more to your question?

(Question read)

A. That would be from the time of the writing of it, I told Mr. E. G. Siggers first, having effected the agreement with Mr. Clutter.

The Court: That is Mr. Siggers, Sr., is it?

The Witness: Yes, sir, our general counsel at Washington, I mean, patent counsel. And then my recollection is not the same as Mr. Siggers in the matter of this memorandum having been presented at the first conference with Mr. Janney at Chicago. As I recall it, this was submitted along with the affidavit of Mr. Clutter, the affidavit of Mr. Wallower, the notes or oral information that we had accumulated up to that time from whoever knew anything about the Joplin experiment, and as to the number of people who knew of it, and the number of employes and non-employes, etc. Then the memorandum was, I think, also presented to Mr. Siggers at the same time—it must have been if he attended the conference—and was again presented to Mr. Richey at the first presentation of the material of the case to him.

Q. Do you recall any of the remarks of Mr. Janney at the first conference with reference to this Joplin incident information? A. Yes, I remember about Mr. Janney's listening to the story of what they had made and of the work, and I recall the incident here that Mr. Siggers has referred to, as to the possible advisability

of presenting this matter at the outset to Judge Westenhaver, or whatever Judge—

Q. Do you remember Mr. Janney's words? A. As I remember it, it is not exactly as Mr. Siggers recalls it. I think he said, now, it might be justifiable as a gesture of honesty at the outset of a case to present to the court the information that we have acquired as to the Joplin suit, and this transaction here with Mr. Clutter. But I recall definitely the word "gesture" and its very apt use in such matter.

Mr. May: That is all.

The Court: Any further cross examination?

Mr. Williams: No.

Mr. Richey: I would like to ask Mr. Fay just another question.

Q. Mr. Fay, that Byers case is still pending on an interlocutory decree, isn't it? A. Yes, sir.

Q. And no motion has been made to reopen and take this testimony, has it? A. No, sir.

The Court: As I understand it, from what the clerk said around here, they have made a motion to reopen it down at Cincinnati. Is that so?

Mr. Richey: No, sir.

Q. No motion has been filed at Cincinnati for leave in the Circuit Court of Appeals to reopen this case for this testimony? A. I cannot answer that definitely, because the case is in the hands of other counsel.

Q. Who are the other counsel? A. Zane, Morse & Norman.

Mr. Richey: Well, I may say that when I left Cleveland, no such papers had been served on us. We have had no notice of it in our office. There have been one or two settlements, and consent decree in another case, and other settlement negotiations with the Star Company within the last couple of weeks.

Mr. Williams: Now, are those statements made for the record here?

Mr. Richey: Yes, sir.

Mr. Williams: I think that is entirely improper, that any question of settlement with other people should be put into this record.

The Court: Well, it is in now; I will leave it.

Mr. Williams: I move to strike it out.

The Court: Well, you can't strike it out. Anyway, it is in there.

Mr. Williams: Well, I will take my exceptions.

The Court: All right; take your exceptions.

Mr. Richey: Now, I don't remember the exact date when this Wallower or Clutter affidavits were submitted to me, but they were submitted to me before the trial in the Byers case. I don't remember when that Exhibit 98 was first submitted to me—

The Court: That is the agreement?

Mr. Richey: Yes, sir. Nor do I remember that any one told me about what Mr. Janney said about the advisability of submitting this to the court, except that I do remember when I first heard it, it was with the statement, as Mr. Downie says, that it was a gesture of honesty.

The Court: Of course, Mr. Richey, you did see Exhibit 98, unless the intimate connection between the Exhibit 98 and 113 were explained to you, it wouldn't help you any, anyway. The question was whether you got all the facts as they have developed in this hearing.

Mr. Richey: Well, I went over the thing, and it looked to me like an abandoned experiment, and didn't anticipate anyway, and I saw no need of burdening the court with a lot of testimony that did not seem to me to be material. And I still have that view.

Mr. Corbett: Have you finished with Mr. Fay, Mr. Richey?

Mr. Richey: I think so. Mr. Downie did suggest to me that the matter might be called to the attention of the court and I told him I didn't think it was necessary, and any way there were a number of people that knew about it, and it could be found out by the defendant, if the defendant thought it proper.

The Court: Did he tell you that before the trial of the Cleveland case?

Mr. Richey: Yes, sir. That is, I knew about this alleged Joplin experiment before the trial in the Cleveland case, but, as I say, it is in my opinion an abandoned experiment, and the claims were not anticipated by it anyway, and there are about one hundred prior devices in the case, and about a million that might be put into it, abandoned experiments, and all kinds of things that people now would contend that was pertinent to the case, just as this defendant here has brought in a lot of things that were culled out of that case, and it might just as well

be said that we should call the attention of the court to those.

The Court: Well, is the case closed now all around?

Mr. Williams: We have no further witnesses, but we want to read into the record some parts of this brief.

Mr. Richey: Let's agree to put in that whole brief, if you want to put in a part of it.

Mr. Williams: Well, I don't want to add to this record any more than necessary.

The Court: Well, we understand that you may supplement it by such other parts of the brief as you think are relevant.

Mr. Richey: What part are you going to put in?

Mr. Williams: I wish to read from the brief of the plaintiff appellee in the United States Circuit Court of Appeals for the Sixth Circuit in the case of The Byers Machine Company and Byers Machine Company vs. Keystone Driller Company, quoting from the top of page 43 of the brief as follows:

> "If new results are the test of invention, it is present here. Nobody before Downie had conceived how a dump bottom could be mounted and operated in an inward arc machine, or otherwise had seen how the bottom could be closed or operated to dislodge the sticky spoil or to root in a trench. Nobody had been able to see that before."

And then on page 45 of the brief, after speaking of certain defects in the Clutter ditching machine, the brief proceeds—that is, Leroy Clutter—

> "On the other hand there were perhaps a thousand skilled mechanics working daily with the five or six hundred Clutter machines used. All these mechanics experienced the inconvenience of the shortcomings of the Clutter machine. All were also familiar with the drop ends of bottoms in the steam shovels and skimmers which were often working on the same job with the Clutter ditcher; all were familiar with the advantages of dumping through an openable part of the scoop; many had operated shovels and skimmers in that way; yet not one of these mechanics saw how to apply the drop member to the Clutter machine. Any number of contractors were equipped to put the skimmer bucket on the Clutter's ditcher, if that was all there was to it."

And in substance, the same statements were made in the District Court in Cleveland in that same case, in the brief of the Keystone Driller Company.

The Court: Do you care to read in any of the brief?

Mr. Richey: Why, I would like to take advantage of Your Honor's offer to look it over and see if there is anything there.

The Court: All right; anything further outside of that?

Mr. Mahoney: Merely we have some objections we want to put in; we reserved them some time ago.

The Court: Well, you want to be doing it right away. When do you think you are going to make the objections? It certainly is not fair to counsel who have to meet the objections, to wait until the case is closed, and then expect counsel to revamp their position if they can, in view of the objections.

Mr. Corbett: Your Honor, that is all.

The Court: You have no objections?

Mr. Corbett: No objections.

The Court: Then I understand the case is closed, with the single exception, Mr. Richey, that you are entitled to read into the record any parts of your brief which you desire to read into it, in view of these last offers on the part of the defendant.

Mr. Richey: Yes.

The Court: We will start the oral argument at 9:30 tomorrow morning.

(Wednesday morning session, May 13, 1931.)

Mr. Richey: If the Court please, on this question of the brief, I have looked over the brief and I am going to offer in evidence a copy of the entire brief. What is our next number?

The Clerk: P-76.

Mr. Corbett: I understood, Your Honor, he was to be permitted to introduce just the things to which this matter related.

Mr. Richey: I do that because excerpts which the other side has read into the record must be considered in connection with the spirit of the whole brief. The whole brief is written upon the proposition that the practice of patent law is based upon successful things, not failures, and that is the decision of the Court of Appeals. They have read two excerpts in there, intending to use them to show that they are in conflict with what we knew of

and of course what we knew of as being a failure. So I offer the whole brief in evidence.

Mr. Corbett: Objection.

The Court: You may make arrangements to have it sent up as a physical exhibit. I do not think you are meeting the contention by putting in the whole brief. That is your business, not mine. I thought the way to meet what they put in was to put something in that counteracts that. If you think it takes the whole brief, put it in.

Mr. Richey: There is no desire to counteract what has been said. The thing to do is to show the context and the surroundings of it.

The Court: All right.

Mr. Richey: Now there were stipulations in this case.

Mr. Williams: Before we pass from that, I think Your Honor's suggestion should be followed and that this P-76 should be filed as a physical exhibit.

Mr. Richey: I will file it as a physical exhibit. It does not need to be reprinted.

Both sides rested.

The above and foregoing was all the evidence offered and received at the trial of the above-entitled cause.

Thereupon arguments were had by counsel for the respective parties.

MEMORANDUM OPINION.

(Filed June 22, 1931.)

[Cases Nos. 964 and 965]

HAHN, *J.*:

These two cases were consolidated for the purposes of trial and involve the validity and alleged infringement of five patents:

Clutter Patent No. 1,317,431, ditching or excavating machine (claim 4);

First Downie Patent, 1,511,114, excavating machine (claims 6, 7, 8, 9, 10, 11, 12, 13 and 14);

Second Downie Patent, 1,543,250, elimination of blind spot (claims 1, 2, 3, 4, 5, 6, 9 and 10);

Third Downie Patent, 1,709,466, ditcher-scoop assembly (claims 1, 2, 8, 10, 11, 12, 13, 15 and 19); and

Fourth Downie Patent, 1,716,432, side rake tooth (claims 1, 14, 16 and 18).

The cases involve substantially the same issues, which are supported by the same testimony. The only exception is that The General Excavator Company alone is claimed to infringe the last patent named, the Fourth Downie Patent, 1,716,432, because of the manufacture by that company in the year 1929 of thirty-one side rake teeth.

The three patents first named were in suit in the Eastern Division of this District. Their validity was sustained and the decision of the District Court was affirmed: *Byers Machine Company v. Keystone Driller Company*, 44 F. (2d) 283. This case has been referred to in the evidence as the Cleveland suit and as the Byers suit. It is urged here that the binding effect of this decision is such in these cases that this court should not reconsider the question of validity of the first three patents named, although a different record has been made in this court. In discussing the rule to be applied to the binding effect of prior decisions various phrasings have been employed by the courts.[1]

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[1] See *Federal Electric Co. v. Flexlume Corp.* (C. C. A. 7), 33 F. (2d) 413, certiorari denied, 280 U. S. 590, holding decision on patent once sustained on appeal should be followed unless clearly shown to be erroneous, though new matter, not merely cumulative, will be given full consideration.

CLUTTER PATENT No. 1,317,431.

As to this patent new and impressive evidence as to the prior art has been offered, and this evidence has to some extent been met by new evidence offered on behalf of the plaintiff. I have examined it carefully and have come to the conclusion that it is not so clear that the District Court and the Circuit Court of Appeals would have come to a different conclusion upon the record before me and hence that I should follow the decision in the Byers case. It is more fitting and proper that the new evidence and new arguments should be addressed to the Circuit Court of Appeals. Accordingly I hold the Clutter patent to be valid and infringed.

THE FIRST DOWNIE PATENT, No. 1,511,114.

The defense as to this patent was no invention and non-infringement, and it was further claimed that the plaintiff through its general manager, Rex Downie, who was also the patentee, suppressed material evidence relative to certain work done in Joplin, Missouri, several months prior to the filing of his application; and that by reason of the suppression of such evidence the plaintiff comes into this court of equity with unclean hands and should be denied any relief in this court of equity. I shall consider this issue later on in this opinion.

THE SECOND DOWNIE PATENT, No. 1,543,250.

As to this patent I find that the defendants' machine does not infringe.

Referring to this patent the Circuit Court of Appeals said, at page 285:

> "Of the second Downie patent little need be said. Its main purpose was to eliminate the so-called blind spot in the unloading operation. This was accomplished by the adding of abutments or bumpers to the link connection with the ditcher stick."

Ray et al., v. S. T. Johnson Co., 33 F. (2d) 632; and *Lektophone Corp. v. Miller Bros. Co.*, 37 F. (2d) 580. Decision of another circuit court of appeals should be followed, &c.

Thomson Spot Welder Co. v. Ford Motor Co., 268 Fed. 836, Killits, *J.* Larger and different record.

Meurer Steel Barrel Co. v. Draper Mfg. Co., 260 Fed. 410, Westenhaver, *J.* In the absence of clear conviction upon essentially the same record.

See *Outlook Co. v. Presto Cloth Mfg. Co.* (C. C. A. 6), 267 Fed. 193; and 48 *C. J.* 408, Note 66 (a).

It appears from the evidence that the blind spot does not interfere (or seldomly so) with the machine during the digging operation, and interferes with the operation of the machine only when it is sought to unload the spoil at very high altitudes. This is also the situation with the Keystone machine. To prevent the blind spot Downie contrived the stops and abutments which are the subject matter of his second patent. The defendants have a machine somewhat different in construction so far as this patent is concerned, and I am satisfied from the evidence that that difference in construction between the plaintiff's machine and the defendants' machine reduces the interference from the blind spot in the defendants' machine to a negligible quantity.

The difference between the plaintiff's construction and that of the defendants is aptly illustrated in Def. Ex. 85, Chart 60, where both devices are illustrated. The difference is that the upper arm of the ditcher stick of defendants' devices is longer than that of the plaintiff's. This distance upon the plaintiff's machine is represented by the distance A to B on the upper figure of Def. Ex. 85. As to the defendants' machines it is represented by the distance C-D in the lower figure of the above exhibit. See also Def. Ex. 34, Def. Ex. 87, Chart 40, and Charts 41 and 42 which do not seem to have been given an exhibit number, but which were used in the evidence and in the argument. The testimony is that if the distance between A-B in the upper figure of the first-named were increased the range of the operation in which the blind spot would occur would be decreased. Downie who testified as an expert on his own behalf practically admitted this contention, adding however that to increase the length of the upper arm of the ditcher stick would be to impair the efficiency of the excavator in other unnamed respects.

Defendant does not have the stops and abutments of the Downie patent, but it is said that the channel beam on the inside of defendants' ditcher stick performs the same function as the stops and abutments of Downie's patent, and that this is especially so when a triangular portion is cut from the extreme upper part of the channel beam as appears to have been done in some of the defendants' machines. It is said that the channel beam is an equivalent and that the Downie patent is infringed. In my opinion whatever may be said of defendants' infringement of claim 4 of the Clutter machine, it is con-

structed in a materially different way so far as the patent now under consideration is involved. This construction practically avoids the blind spot, and the channel beam is said to reinforce and does reinforce the boom of the defendants' machine. It does not seem to me that this channel beam is the equivalent of the stops and abutments of the Downie patent, even though in performing other normal functions it prevents the occurrence of the blind spot.

The validity of this patent was sustained by the Circuit Court of Appeals upon the ground that it was an improvement in the several elements of the Clutter device, and, as an improvement patent it is entitled to only a narrow range of equivalents. Downie's patent, it seems to me, gave him the right to exclude others from using stops and abutments for the purpose of eliminating the blind spot of an excavating machine. It gave him the right within a narrow range to exclude the use of equivalents; but it did not give him the right to exclude others from eliminating the blind spot by other means, nor did it give him the right to exclude others from so constructing their machines that the blind spot would not occur within the normal cycle of operation. It seems to me that to hold the channel beam in this instance to be an equivalent would go a long way toward holding that Downie had the right to exclude any one from eliminating the blind spot from his machine. What was said by Judge Hickenlooper, in *Merit Oil Equipment Co. v. Frey Equipment Corporation*, 48 F. (2d) 488, at page 489, is particularly apropos here:

> "We are of the opinion that in so far as the means disclosed for keeping the strainer clean is of the essence of the inventive step, even though of but one element of the machine or combination, the patentee may not claim any, all, and every means for accomplishing the desired result."

And see the following authorities: *Walker on Patents*, 6th Edition, Section 414, Note 62, Note 66-b; Sections 416, 417, Note 100-a; *Holland Furniture Company v. Perkins Glue Company*, 277 U. S. 245, 257, 72 L. ed. 868, p. 873.

THE THIRD DOWNIE PATENT, No. 1,709,466.

This patent covers the means of using scoops of different widths upon the same machine, making them detachable and interchangeable.

I have been unable to find patentable invention in this third Downie patent. It relates to an adaptation of the parts of the ditcher sticks and scoops to the end that scoops of different widths may be used interchangeably upon the same machine. The patent does not relate to or concern the functions of the machine when in operation. It provides for changes of scoops before such operation. In that sense it is not an improvement patent.[2] When it became apparent that a machine must use more than one width of scoop and that the utility and salability of machines would be increased if provision were made for using scoops of different widths interchangeably, the problem of this patent presented itself, and it seems to me that any mechanic skilled in this art and many related arts would have readily solved the problem. It is conceded that the idea of interchangeability of parts such as scoops was not new. It was obvious that rigidity was necessary and easily attainable, and that durability was desirable for the structure must be rugged to be able to withstand the shocks of operation. Any highly skilled mechanic familiar with this art or related arts it seems to me would have met the problem in somewhat the same way that Downie did in this patent. Both of the defendants have met the problem, though in different ways. See Def. Ex. 81, Chart 102, the General excavator; Def. Ex. 91, Chart 101, the Osgood machine.

I conclude from the evidence that there is no patentable invention in putting bolts in tension rather than in shear. See King, No. 589,565.

I have examined the file wrapper, Def. Ex. 66, to ascertain if the presumption of novelty and invention arising from the issuance of the patent requires a different conclusion. I think it is outweighed by the evidence adduced on behalf of the defendants. Included in that evidence is the evidence relating to the former (1884) Osgood devices, Def. Exs. 68 and 69, and the Thew device, Def. Ex. 59-A. The file wrapper shows only one

[2] In the Byers case, at page 284, the court said: "The other patents in suit relate to improvements in the several elements of the Clutter device of the class which usually follow the disclosure of new instrumentalities in their evolution toward perfection in doing the work originally contemplated."

reference by the examiner (Black, 1,107,252, August 18, 1914), and the file wrapper does not indicate that any extensive consideration of this patent was undertaken by the Patent Office. The presumption of novelty and invention has not been strengthened in this instance. *Gairing Tool Company v. Eclipse Interchangeable Counterbore Co.* (C. C. A. 6), 48 F. (2d) 73, 75.

Nor do I think that any doubt which I may have should be resolved in favor of novelty and invention because of the commercial success of the Keystone machine as a whole. That commercial success was proven in the Byers case, but was not satisfactorily proven in this case. The patent now under consideration was not before the Circuit Court of Appeals and it could hardly be claimed on the record here that Downie's particular means of interchanging scoops contributed to any appreciable extent to the commercial success of the Keystone machine. *Haggerty v. Rawlings Mfg. Co.* (C. C. A. 8), 14 F. (2d) 928, 930.

Concerning this patent the further thought has always appealed to me, that if there is patentable invention here the range of equivalents would be very narrow. In my opinion it would be so narrow as not to include either of the devices of the defendants.

THE FOURTH DOWNIE PATENT, No. 1,716,432.

As already indicated it is claimed that The General Excavator Company alone infringed this patent because in the year 1929 it manufactured thirty-one side rake teeth of the type of defendant's physical exhibit, No. 82. A wooden model of plaintiff's side rake tooth is Plaintiff's Exhibit No. 63. I have come to the conclusion from an examination of all of the evidence that this patent is a valid improvement patent and within the spirit of the decision and principles of the Byers case. In this instance the file wrapper, Def. Ex. 83, shows that the patent office considered and rejected as anticipations many references to the prior art "and this at least greatly strengthened the presumption of novelty and invention which arises from the grant of the patent." *Gairing Tool Company v. Eclipse Interchangeable Counterbore Co., supra,* and I conclude from all of the evidence that Downie's contribution presents a case of patentable invention.

Only a word need be said about infringement. Defendant's Exhibit 82 is very similar to the plaintiff's

device, Pl. Ex. 63, and it performs the same functions in substantially the same way, with the exception only that the defendant has impaired the horizontal cutting edge of its side rake teeth. It has attempted to avoid infringement by impairing the efficiency of its device. It cannot in that way escape infringement. *Gibbs v. Triumph Trap Co.* (C. C. A. 2), 26 F. (2d) 312, 314; *King Ax Co. v. Hubbard* (C. C. A. 6), 97 Fed. 795; and *Penfield v. Chambers* (C. C. A. 6), 92 Fed. 630, at page 653.

SUPPRESSION OF EVIDENCE ISSUE AS TO DOWNIE PATENT No. 1,511,114.

As already stated as to this patent defendants claim that it was anticipated by the work of one Bernard R. Clutter done at Joplin, Missouri, in the fall of 1919 and the early months of the year 1920. As to whether or not this work anticipates Downie's patent, I do not think I should determine for the same reasons which I have given herein in considering Clutter, 1,317,431. New evidence is here presented as to this claimed anticipation. The matter can more properly and more fittingly be presented to the Circuit Court of Appeals.

I feel free to decide the further contention as to the suppression of evidence made with reference to this patent because it involves to some extent the credibility of witnesses; and the issue, it seems to me, must be decided by the Circuit Court of Appeals. I have given it very careful consideration. The contention is that all of the evidence with reference to the Joplin work was very material and relevant in this case and that Rex Downie, the patentee, when general manager of the plaintiff company, made agreements whose tendency was to suppress this evidence, and by his acts and conduct intended to and did suppress evidence relating to the Joplin work; that that suppression was operative in the Byers case, both in the District Court and in the Circuit Court of Appeals; and that it has been operative to such an extent in this case that the plaintiff comes into this court of equity with unclean hands and that this court of equity should deny equitable relief to the plaintiff company. It is further argued that Downie's acts and conduct in the above respect adversely affect his credibility in this case, and that because of this suppression of evidence in the Byers case, this court should not consider the Byers case as having any binding effect in this case.

The defendants' claim as to the initial agreement to suppress evidence as to a claimed anticipation of this patent concerns itself initially with two conferences which resulted in the signing of an affidavit, Def. Ex. 113, and an agreement to pay compensation, as provided for in an unsigned memorandum, Def. Ex. 114 (the original), Def. Ex. 98 (the carbon copy). In order to appreciate the character of the defendants' contention, it is necessary to have in mind the devices in use and the patents prior to Downie's Patent No. 1,511,114.

Period About Latter Part of 1919 and Early Part of 1920.

At this time the Keystone Driller Company was making a ditching and excavating machine under Clutter Patent 1,317,431, which was involved in the Byers suit in the Circuit Court of Appeals, and its validity was there sustained. Attention is directed to the character of the scoop and its method of attachment. See Plaintiff's Exhibit No. 1, 4-A of Figure 1, at 2. The scoop had no drop bottom and was pivotally attached to the ditcher stick. This caused difficulty in unloading where it was desired to unload the spoil into wagons standing nearby. There was difficulty in spotting the load and the scoop often injured the sides and other parts of the wagon. Clutter said the difficulty principally was the spilling of the material over the sides of the wagon. This was caused by the pitching forward of the scoop when dumped which was caused by the cable hook-up. The scoop had a tendency to pitch forward. This was caused principally by the strain of the cable on the attachment. Wallower testified: "In tripping the latch of the pivoted bucket it was difficult to control the dumping at its intended place and resulted in much spillage of spoil and the wreckage of dump wagons." Downie refers to the breaking of the wagons in his application for his patent. See pages 5 and 54 of the file wrapper, Def. Ex. 65. And in the Byers case, at page 285, the court said: "The Clutter machine could spot the load accurately, *but it could not dump it accurately.* Clutter's construction was incapable of loosening a sticky clay load from the scoop without destroying the accuracy of the unloading process."

During the above period Burn. R. Clutter (brother of Leroy P. Clutter, patentee in No. 1,317,431) was em-

ployed in excavating for a cellar at Joplin, Missouri. He was employed by Wallower Brothers. A machine of the Leroy P. Clutter type was being used in the work and in operating the same he encountered spillage when unloading the scoop. There had also been allowed to Leroy P. Clutter a prior patent, No. 1,107,899, of August 18, 1914, Def. Ex. 25. This patent in part involved a skimmer scoop with a drop bottom. See patent, figure 9, and especially middle sheet of Pl. Ex. 21.

The idea of making such a change having first come to him in 1916, Burn. R. Clutter in his excavating work at Joplin went to the Joplin branch of the plaintiff company, and with Herbert H. Wallower, of Wallower Brothers, requested the plaintiff's employees to make alterations in two skimmer scoops (one was used and one was held against emergencies) to the end that he might rigidly attach a drop bottom scoop to the ditcher stick and unload the same by dropping the bottom of the same, the purpose being to avoid the difficulties encountered in using a pivotally attached scoop. He testified that he ordered the brackets or carrying rack which supports the skimmer scoop to be removed and holes drilled into the skimmer scoop so that it could be attached to the ditcher stick, the same as ditcher stick 3 in patent No. 1,317,431. He used the same attachment that was made for the regular ditcher scoop No. 3. The straps which supported the old type ditcher scoops were fastened to the front of the scoop as on the ditcher scoop of 1,317,431. A pulling member was attached to the skimmer scoop for pulling it toward the machine when used on the in-stroke ditching machine by bail attached to the skimmer scoop, the same as in the ditcher scoop 3 of the above patent. He was told at the Joplin branch that he would not be able to close the door on the bucket, but the changes were made and the skimmer scoop had a drop bottom thereon pivoted at the side walls of the scoop like that shown in Clutter Patent 1,107,899, Def. Ex. 25, at the front end of the scoop. The skimmer scoop was made rigid first by a wedge under the latched hook spring 15 of patent 1,317,431, and this not proving satisfactory later Clutter took the latch hook off and used a block underpin 5 which was formerly movable through a slot 16-A between guide 6 and scoop carrying member 1. This block or plank extended the entire length of the slot 16-A. This held the scoop rigidly when in use. The result of the changes appears in detail in a blueprint,

Def. Ex. 26, and needs no further elaboration. See also Pl. Ex. 2, Downie's patent, p. 4 (claim 6), lines 126-130. The blueprint was made from a drawing made in 1929; and it seems that this is a matter which might in all of the circumstances of this case be proven by a single witness. *Corona Company v. Dovan Corp.*, 276 U. S. 358, at page 382. There were of course other witnesses also in this case.

As to the result of the changes, Clutter testified that he did not have much further trouble with dirt spilling over the sides of wagons; that they had a little trouble at first closing the bottom of the drop bottom scoop, but later they were able to do this by swinging and slapping the bottom shut. This was the forerunner of momentum closing of the scoop referred to in the Byers case (p. 285). At first this closing was attempted by using two men with a pole running under the boom "which crept up and pulled the bottom shut." Clutter testified that he was able to close the bottom by the motion of the boom and ditcher stick and thus swing the bottom shut. In other words he claims to have flipped the bottom shut until the latch closed. There was trouble because in dumping them they had to keep men on the opposite side of the wagons from the machines and pull the latch closed. And Clutter testified that it did not require much of an improvement to remedy this situation. The reconstructed device was used on this job for possibly a month or more and many of the employees of the Joplin branch of the plaintiff company, including Mr. Oliver, who was superintendent of the branch, Mr. Culbertson, Mr. Blosser, Mr. Hazen and possibly Mr. Ransome, saw the reconstructed excavator in operation. Wallower testified: "By facilitating the dumping of sticky, clayey and other material from the scoop, and also by being able to more accurately dump the material in the wagons with less spillage and less delay than was formerly encountered."

Proceedings After the Completion of the Joplin, Missouri, Work.

Downie testified that he conceived his invention embodied in Patent 1,511,114, in the summer of 1920, and that he conveyed the details of his conception to E. G. Siggers, Sr. (now deceased), his patent attorney, in Washington, D. C., about December 18, 1920, and that the data relative thereto was supplied to Mr. Siggers

in February, 1921. He further testified he first heard or had any knowledge of the work at Joplin, Missouri, in January, 1921, when some information relative thereto was conveyed to him by Mr. Oliver and Mr. Hazen. It is claimed by Downie that at this time he was informed that the work of Burn. Clutter had been done at Carthage, Missouri, and it was not until later that he learned that the work was done at Joplin. His patent application was filed June 27, 1921, and allowed and issued October 7, 1924. Upon the issuance of the patent the plaintiff company, and particularly Mr. Downie, as he testified, contemplated the bringing of various suits against infringers; and it was then that it occurred to Mr. Downie that it was advisable to learn the details of the Joplin, Missouri, work, and to enter into some kind of arrangement or agreement with Mr. Bernard Clutter. He testified that there may have been three conferences with Mr. Clutter, but the record presents details of only two conferences.

Two Conferences Between Rex R. Downie and Bernard Clutter, One Under Date of April 16, 1925, and One Prior Thereto.

At the first of the above conferences Mr. Rex Downie, accompanied by Mr. Elmire from the New York branch of the plaintiff company and who lives in Arlington, New Jersey, visited Mr. Burn. Clutter at his home at Lakewood, New Jersey, during the evening. As they were leaving, Mr. Downie and Mr. Clutter had a private conversation and had some kind of an understanding the details and scope of which do not appear with definiteness by direct evidence. April 16, 1925, Downie and Elmire again called on Mr. Clutter, at Lawrence Harbor, New Jersey, where he was doing some work. What was done on that trip will appear more in detail in the summary of the testimony of Mr. Elmire. As a result of the second trip, Mr. Clutter signed the affidavit, Def. Ex. 113, and there was an agreement for the payment of compensation to him as provided in Def. Ex. 114 (the original) and Def. Ex. 98 (a carbon copy). A summary of the testimony of the above three witnesses will be given in the order in which such testimony appears in the record. The testimony of Mr. Clutter was taken by his second deposition at Lakewood, New Jersey, on the 21st day of October, 1930. Mr. Elmire and Mr. Downie testified in open court on the trial of this case.

SUMMARY OF SECOND DEPOSITION OF BERNARD CLUTTER TAKEN OCTOBER 1, 1930.

Mr. Clutter testified that Mr. Downie's first visit to him at Lakewood, New Jersey, was a voluntary one and Downie asked him to go outside of the house to talk over some private business; that Elmire stayed in the house; that he and Downie went out into the yard; that Downie informed him he wanted to talk over some business privately; that he did not want any one to know anything about it; that it was regarding the drop bottom ditcher scoop that Clutter had had out at Joplin, Missouri. He explained that the Keystone Company had had a patent on a drop bottom ditcher scoop, and that Clutter apparently had made, or had had made, the first one at Joplin, Missouri; and that he could cooperate with them in the protection of their patent. Clutter told him that if he first made the scoop it was his invention, and that he could not see where they had any right to the patent; but after considerable jarring Downie told him he did not have enough money to go into court to fight the Keystone Driller Company, and that that was a fact; that Downie said, if there had been a wrong done, "Let's get together and see if we cannot right the wrong"; and that Clutter asked him how that could be accomplished. Downie said he would sell him a new machine at half price. Clutter, realizing that this was the only opportunity he had to realize upon his invention, accepted the proposition. He asked Downie if he would go into the house and draw up a contract to that effect. Downie said, "No, not now." He said, "Now that is the ticklish part of this thing"; that it was a question as to whether there could be anything drawn up in writing that would be of any advantage, and that any papers showing a deal between them might serve to invalidate the patent. Downie said he would find out if there was any way they could hold him and see him later. They also told Clutter that he would have to "sign a statement in full for the machine" and that later a credit would be issued to him for his half interest; and that he would have trust entirely to Downie's honesty to carry out the deal. He asked Clutter not to say anything to Elmire or any one else as to what his business was down in Lakewood. He testified that Downie explained to him he was to cooperate by keeping absolutely quiet in regard to his part of the invention. The full price of the Keystone excavator,

including attachments, was $8200 (it was in fact $8,240. See Def. Ex. 96) and that Downie stated that they were going to start a suit or suits against infringers. Clutter testified that the machine received by him was receipted for by the Pennsylvania Railroad Company at Beaver Falls, March 12, 1925; and that he never received all of the scoops or attachments (see Def. Ex. 38).[3] Mr. Clutter testified that his recollection was that the second visit, when the affidavit was signed, was prior to the receipt of the machine by him. Upon his second trip Downie said: "They were going to tie me hand and foot if such a thing is possible." He testified he had no recollection of reading the papers; that he was not furnished a copy; that he had requested one but that Downie said they could not have any copies out, and that it was a question as to whether or not they could ever use the papers they had or not. Clutter further testified that later Downie saw him at Roseland, New Jersey, and informed him they would have to take the machine back unless he could raise a portion of the money to cover his arrearage; that he told Downie if he took the machine away from him it meant he would lose anything he might ever realize from the patent on the drop bottom ditcher scoop; that if he did take the machine away it was not going to do him any good; but that Downie informed him that he did not want him to feel that way about it; that Downie then offered to submit a cash instead of a credit proposition on the machine; that this proposition was to pay half of the amount of the "anticipated credit in cash"; that because of his failure to take all of the parts the purchase price was $3808; and that the final cash settlement was for one-half of the value of the machine or $476, which was the amount received by Clutter in partial settlement, as evidenced by Def. Ex. 108.

Clutter testified that in the summer of 1920 Mr. Oliver, then manager of the Joplin branch, told him that Downie had been working on a drop bottom scoop and "was filing for a patent on it, or taking out a patent." This was when Clutter told him of his intention to apply for a patent.

Clutter had left the employ of the Keystone Company at the time of the Joplin work. In the summer of

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[3] As a result the parties finally dealt upon the basis of $7,616 as being the purchase price of the first Keystone excavator, and when a cash settlement was made in lieu of a credit upon the excavator, that figure was used. See Def. Exs. 107, 108, 38 and 111.

1920 he received an offer from the Keystone Company to go to Trinidad in the British West India Islands. He made a counter-offer, which was accepted. He remained there until some time in 1921. His duties were to set up and demonstrate an excavator, which the company had sold and delivered at that point.

SUMMARY OF TESTIMONY OF HOWARD H. ELMIRE.

Mr. Elmire was at all times an employee of the plaintiff company, and at the time that he accompanied Mr. Downie on trips to interview Mr. Clutter he lived at Arlington, New Jersey. As to the first conference his testimony is that he and Mr. Downie went to Mr. Clutter's home, and Mr. Downie said that he had some kind of deal on with Mr. Clutter; that their talk was general while Mr. Elmire was present; and that when they went to leave, Mr. Elmire went out and sat in his car which was parked at the curb, and Mr. Downie and Mr. Clutter stopped in the yard and stood there and talked three or four minutes. Mr. Elmire did not hear any of this conversation.

At the time of the second trip Downie and Elmire went to meet Clutter at Lawrence Harbor, where he was doing some road work. He was also doing work at Tom's River, on the road to Atlantic City, and at that place they went before a notary, who was also a garageman and acted as notary in the execution of automobile licenses and such like. Elmire testified that Clutter executed the affidavit and that they went from there to Lakewood, New Jersey, where they had dinner at a restaurant. After they left the restaurant Clutter stated that he had signed the affidavit that he had abandoned the experiment, and he thought that was sufficient to show that he had abandoned the experiment; and Mr. Downie said, in reference to the agreement: "Here, I will give this one to Elmire to hold and we can see it at any time." Nothing was said about the affidavit. Elmire took the copy of the agreement, Def. Ex. 114, and placed it in his safety deposit box and had it forwarded to him while he was at Beaver Falls, Pennsylvania, and produced it as an exhibit at the trial. Elmire also testified that Downie told Clutter that he had with him an affidavit which Clutter had agreed to sign on their first visit. He testified that the time intervening the first and second trips was "two or three weeks or so."

SUMMARY OF TESTIMONY OF REX R. DOWNIE.

Downie testified that he conceived Downie Patent 1,511,114 in the summer of 1920; that he advised his patent counsel at Washington, D. C., Mr. E. G. Siggers, of the fact in December of 1920; that he first learned of the work at Joplin, Missouri, through Mr. Lyle Hazen at a sales conference of the company at Beaver Falls, Pennsylvania, in January, 1921; and that he gave the details of his invention to his patent attorney about March, 1921. He denies that he had any knowledge of what transpired at Joplin prior to his own conception as embodied in his patent; and says that, while he may have seen Mr. Burn. R. Clutter between the years 1920 and 1925, he did not see him during that period after he learned of the Joplin work. He is uncertain as to whether or not he went to Lakewood, New Jersey, two or three times for the purpose of securing the affidavit, Def. Ex. 113. By his testimony he seeks to leave the impression that on a visit to Lakewood, New Jersey, prior to April 16, 1925, the date of the signing of the affidavit, Burn. Clutter either advised him that he had an application in the patent office or that he left that impression upon Downie; and that the consideration which had a possibility of amounting to one-half of $8240 was to cover two things; first, any patents which Clutter might secure; and second, a reduction to writing of what transpired at Joplin.

Downie testified that there was a private conversation between him and Clutter as testified to by Clutter, but he denies that at any time he enjoined secrecy upon Clutter or expected it of him. He testified that the affidavit was executed at the notary's office at Tom's River, New Jersey, where Clutter was also interested in or engaged in executing the necessary papers for the procurement of licenses for his White trucks. He claims the affidavit was read there by Clutter. Downie's idea was that the affidavit represented Clutter's own story as to what he did at Joplin. He states that he does not know whether the copy of Clutter's affidavit was retained by him. Downie's testimony as to why the agreements, Exs. Nos. 98 and 114, were not signed, is as follows: "Because at the time of the execution of the affidavit, I learned by direct questioning of Clutter and after having informed myself further from counsel as to the worth of what Clutter had; that is to say, Clutter then advised me point blank that he did not really have an applica-

tion in the patent office, and I had learned from counsel in the meantime that if he had not yet applied, he had no right to apply because the work had occurred too far before, and therefore there was no object from my view in having Clutter execute the agreement." And further: "In other words, there was no further consideration from Clutter coming to us; and it was all a matter of what we might owe Clutter on account of my original deal." He also testified that the consideration agreed to be paid Clutter was not paid for signing the affidavit,[3A] but "in consideration of his earlier promise that if he had any rights or came to have any out of that Joplin ditcher as inventor or co-inventor, he would make such rights over to the Keystone Company."

With reference to the statement of Herbert H. Wallower, Pl. Ex. 73, Downie testified he did not know who prepared it; he thinks either Brown Ransome or Mr. Wallower himself; and that the statement was procured by Mr. Ransome at the instance of the company. Ransome was acquainted with Wallower. He testified that Mr. Oliver was still living and was at the Joplin plant; and that Mr. Theodore Smith was still living and was with the company as treasurer at Beaver Falls.

Testimony and Exhibits Relating to the Purchase of Two Excavators.

The second excavator purchased was purchased about July 14, 1925. (See bill of lading, Def. Ex. 41, and 10th entry on Def. Ex. 93, in amount $7,150.) There is not much testimony concerning it except as it is referred to along with the first excavator in subsequent correspondence. (Beginning, Def. Ex. 104, January 9, 1928.)

The first excavator is first referred to in the correspondence in Def. Ex. 95, under date of February 11, 1925. In this letter it is said that,

> "Rex Downie states that he has not definitely decided upon the special considerations and the exact details, but he states that if you want to place

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[3A] In a letter to Clutter under date of December 17, 1928, Def. Ex. 40, Downie said:

> "The consideration from you to us was that you conveyed to us whatever undetermined right you might have or might come to have arising out of your Joplin experiment; *also as a part of the consideration you made affidavit as to the abandonment of that experiment.*"

> your order for a shovel before he can reach a final conclusion that we are to take your order on the basis of an initial cash payment of $500, maximum time eighteen months for balance."

This was a letter addressed to Clutter by the Keystone Driller Company. It would indicate either that there was a conference prior to the time that Elmire and Downie went to Clutter's home at Lakewood, New Jersey, or that that meeting was held much earlier than the date indicated in the oral testimony, which places the conference at several weeks prior to the 16th day of April, 1926.[4]

The deal was afterwards made, and as it appears set out in the chattel mortgage, Def. Ex. 101, and bill receivable account, Pl. Ex. 74, was along the lines indicated in the letter just quoted, Def. Ex. 95. Clutter made a payment of $500, Def. Ex. 99, and the chattel mortgage calls for the payment of eighteen notes over a period of eighteen months, chattel mortgage Exhibit 101. It appears from Exhibit 96 that Clutter signed a contract lease on February 28, 1925; the invoice Exhibit 96 is dated March 9, 1925; and on the 16th day of March the Keystone Driller Company wrote Clutter a letter, Def. Ex. 37, with reference to these matters. Significantly, three of the exhibits bear date of April 14, 1925, two days before Clutter executed the affidavit at Tom's River, New Jersey, Exhibit 113. Under date of April 14 the bill receivable account, Ex. 74, was opened. Thus it appears that two days before the execution of the affidavit, Ex. 113, we have the execution of the receipt for $500, Ex. 99, the opening of the ledger account, Pl. Ex. 74, the execution of the same by Bernard Clutter, and the affidavit as to the amount due by Rex Downie. The bill receivable account sets out all of the notes referred to in the chattel mortgage (Exhibit 101) except the first note which was in the amount of $515, and which was due on the 14th of May. The evidence shows that this note was paid on May 23, 1925. The payment then having been overdue there was an interest charge of $2.58; a carbon

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[4] Was it to Downie's interest to see Clutter at the earliest possible date after October 7, 1924, the date of the issuance of his patent? If he became antagonistic and belligerent, might he have filed an application which might have resulted in having an interference declared (48 *C. J.* 149, Note 85, and cases cited) which, even if unsuccessful, would have cast a cloud upon Downie's patent and have brought to light the Joplin work?

of the receipt issued to Clutter being Def. Ex. 100. As already indicated the cash payment required is covered by Def. Ex. 99, which is in the amount of $500, as shown by this carbon copy of the receipt. Under the same date also the chattel mortgage was signed and executed. It is altogether unlikely that Clutter met Downie who was at Beaver Falls upon the latter date, but that date is hand printed in the chattel mortgage, Def. Ex. 101. On the same day Rex Downie swore before a notary public at Beaver Falls, Pennsylvania, that there was due his company on this mortgage the amount of $7740. This of course covers all of the purchase price of the excavator except the first $500 cash payment, which is evidenced by Def. Ex. 99. It therefore includes the payment covered by Exhibit No. 100, and in addition seventeen notes in the amount of $425 each, the latter seventeen notes being the ones shown on the bill receivable account, Pl. Ex. 74. The bill receivable account, Pl. Ex. 74, shows that Clutter made three payments of notes, each in the amount of $425, as follows: June 26, 1925, March 19, 1926, and April 22, 1926. Thereafter there was some correspondence with reference to payments.

On March 16, the credit manager of the Keystone Driller Company wrote Clutter saying that the People's National Bank had returned Clutter's unpaid note dated April 14, with a statement that he was remitting direct.

The next exhibit, Def. 103, shows that on January 15 the credit manager wrote Clutter that he had cancelled four of his notes, due September, October, November and December of 1925, the amount in all being $1700. This item appears on the bill receivable account under date of December 31, 1926. It appears from the evidence that Clutter was relying upon this credit, and Downie testified that he made out a credit memorandum in favor of Clutter, but that through an oversight the treasurer, Smith, failed to enter the credit until the time indicated, December 31, 1925. Smith did not testify upon the subject. This seems to be the only credit entered on Clutter's account because of his agreement with Downie. As already seen, with the amount of the purchase price of the shovel reduced from $8240 to $7616, because Clutter did not take certain attachments, he was entitled to a credit of at least $1904 instead of $1700. This discrepancy is not explained in the evidence. The account is closed by an entry under date of August 11, 1927, and the journal, Pl. Ex. 75, shows that on that date Clutter's shovel was

sold to Harry Gotham for $4250. It is claimed from this entry that Clutter's shovel had been repossessed before the 11th day of August, 1927, and there is no evidence to the contrary.

Referring to Plaintiff's Exhibit No. 74, and summarizing, we find that Clutter made two cash payments, one of $500, Ex. 99, and one of $515, Ex. 100. He paid three of the notes, each in the amount of $425. He received a belated credit in the amount of $1700 on December 31, 1926. This left due on the plaintiff's books ten notes in the amount of $425, and the account was closed by the entry said to reflect the sale of the shovel.

New Agreement Before Shovels Had Been Repossessed.

Both shovels which were sold to Clutter having been repossessed before August 11, 1927, Pl. Ex. 75, which was before any testimony was taken before Judge Westenhaver on September 15, 1927, the wrongful tendency of the plaintiff's contract, Def. Ex. 98, had not been terminated. It appears from the correspondence that prior to repossessing the shovels Downie and Elmire must have had a conference with Clutter at which they agreed upon a cash basis for payment to Clutter and extended the time in which the contingency might happen to the end of 1928. This appears from Downie's memo. (back of first sheet of Def. Ex. 104)[5], from Clutter's letter, Def. Ex. 106, and Downie's letter, Def. Ex. 107. In the latter letter Downie refers to the fact that he had taken up the matter of an understanding (which was a new one) with Elmire, to ascertain whether his recollection and that of Elmire agreed. In Def. Ex. 107 there is a confirmation of what were apparently oral agreements that the time for the happening of the contingency should be extended to the end of the year 1928, and as an enclosure to that same letter Clutter received plaintiff's check in the amount of $476, Ex. 108, which he cashed.

It further appears from the correspondence, Def. Ex. 38, 110, 111 and 40, that a controversy arose between Downie and Clutter, Clutter claimed that he was entitled to more than the further sum of $476, which was the amount he had already received, Def. Ex. 108, and denied

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[5] Downie testified that he made this lead pencil memorandum, but in his affidavit, Def. Ex. 129, he deposed as follows: "There was no other memorandum of agreement oral or written between Mr. Clutter and me or the Keystone Company regarding this matter."

that he had taken the check in part settlement of the controversy, Def. Ex. 110. Clutter was also asking payment of the amount due him before the end of the year 1928, and claimed that he was the original inventor of the device involved in the litigation. Def. Ex. 111, p. 2. Downie was insisting that whatever might later be due Clutter was not yet due; that the further amount which might later become due was only $476; and that there was due the Keystone Company on Clutter's parts account an amount in excess of that amount (Def. Ex. 94 shows $663.38) and therefore refused to make the payment.

There was no further correspondence until November 15, 1928, when Clutter wrote Def. Ex. 109 demanding his check for the balance. Further correspondence follows during November and December of 1928, Def. Ex. 38, 110, 39, 111 and 40, which shows that there was a controversy between the parties, not as to the extension of time for the contingency to happen, but as to the basis of the settlement. The result is that the contingent feature of the consideration to pass to Clutter was extended to the end of 1928. Judge Jones rendered his decision January 23, 1929; and a final decree was entered January 31, 1929. Mr. Fay, who was of counsel in the Byers case, testified that a person whom the parties believed to have been Clutter called him up shortly after the entry of the decree in the Byers case.

Thus it appears that as a result of the agreement, Def. Ex. 98, and the conduct of Downie with reference thereto, Clutter remained in a quiescent state until after the entry of the decree in the Byers case. No further correspondence between Downie and Clutter appears in evidence. Downie testified that he was present at the taking of the first Clutter deposition, and that Clutter wanted to have a conference with him after the taking of that deposition, but the conference did not materialize. Upon the cross examination of Clutter at the taking of his first deposition, none of the exhibits here involved were called to his attention except Def. Ex. 27, under date of February 20, 1926, which is an inquiry with reference to the use of side rake teeth in the Joplin experiment; and Clutter was asked on cross examination by plaintiff's counsel to identify his signature to an acknowledgment before a notary public on the 16th day of April, 1925. Reference was to the affidavit, Def. Ex. 113. Counsel at the time, as the record shows, refused to permit counsel for defendants to inspect the affidavit.

WAS THE TESTIMONY AS TO WHAT WAS DONE AT JOPLIN, MISSOURI, RELEVANT AND MATERIAL?

There would seem to be no real doubt that the testimony as to what happened at Joplin, Missouri, had unusual relevancy and materiality on the question of whether or not that work was an anticipation of Clutter's conception. That relevancy and materiality is emphasized when we consider some of the provisions of Clutter's affidavit, Def. Ex. 113, and what the Circuit Court of Appeals said in its opinion. Downie had investigated Clutter's work at Joplin, Missouri, both before he filed his application, during the time it was pending through his employees at Joplin, Missouri, and after the issuance of the patent. It is not clear whether he had on one of the reconstructed skimmer scoops or a precise reproduction thereof sent from Joplin, Missouri, to the company's plant at Beaver Falls, Pennsylvania. It must be assumed that he drew up the Clutter affidavit using the information which he had obtained. He describes two of the elements of the so-called abandoned experiment as follows: "(6) A scoop rigidly attached to the lower end of the ditcher stick having (7) a falling bottom pivoted to the side of the scoop at a point near the open end of the latter near the lower edge of the sides." The affidavit recites that the other elements, not here mentioned, were precisely the regular Keystone ditcher parts manufactured under Clutter Patent 1,317,431; and then states: "The new contrivance consisted in rigidly fastening a scoop body made after the pattern of the Keystone skimmer scoop to the lower end of the stick providing for discharge by the use of a pivoted bottom."

In *Byers Machine Co. v. Keystone Driller Company, supra,* the court states the elements of claim 6 of Downie's patent which the court states to be typical. Two of them are as follows:

> "(4) The scoop rigid and fixed throughout the cycle of operation;
>
> (6) The bottom pivoted to the sides of the scoop with its axis transverse to the scoop and adjacent to the mouth of the scoop."

To determine whether or not Clutter's work was an anticipation it is necessary to determine just how far there is patentable invention in Downie's first patent over Clutter's patent No. 1,317,431. Does the essence of any inventive step go beyond the above-quoted elements?

In oral argument plaintiff's counsel placed much stress upon the testimony of the defendants' expert witness, Ferris, who testified that it would have been necessary to make Bernard Clutter's Joplin reconstructed machine much stronger to perform the same functions as were performed by the machine constructed under Downie's patent. But in the patent law, contrary to natural law, the race is not always to him who can make strong, but to him who conceives, and the ultimate question on anticipation is: Did a machine constructed according to Clutter's conception as reduced to practice at Joplin, Missouri, anticipate that which is in essence the inventive step of Downie's second patent over Clutter's patent, No. 1,317,431? And was mere mechanical skill involved in making a stronger machine when it was sought to use an excavating machine in digging in rock and other hard materials? This kind of material could not be dug and the thought of doing so did not occur until the in-stroke machine had been contrived. It must of course be conceded that Clutter's machine was crude as compared with Downie's machine, as a finished product, which latter however may have resulted from mere mechanical skill over the crude device which grew out of Clutter's initial conception; but this difference is not serious, it seems, when conceptions and not machines are to be dealt with. The same argument was advanced in *Merit Oil Equipment Company v. Frey Equipment Corporation,* 48 F. (2d) 488, and at page 490 the court said:

> "It is contended that the device of the patent lacked utility, in that its first commercial embodiments were inefficient, but whether the defect was due to the type of pump used, as one witness testifies, or to some other detail, it is not inherent in the invention itself. It would indeed be strange if no change of detail were to result from commercial production, or if improvement in efficiency of organization or manufacture, without departure from the original concept of the inventor, were to destroy the patent."

Conclusions.

I have conceived it to be my duty to reconcile all the testimony with Downie's testimony, his affidavits filed in these cases December 31, 1930, one of which is Def. Ex. 129, and the arguments of his counsel, with the view of

reconciling the testimony upon the theory that what was done by Downie in his transactions with Clutter was innocent and innocuous. It seems to me that while many of his acts, taken singly, might be explained upon such a basis, the effect of all of them is to condemn his conduct as highly reprehensible.

Assuming Downie's explanation that he was paying the large consideration named for a supposed patent, a matter which I will consider more fully later on, one of the vices in his conduct lay in that, under the guise of buying such patent rights, he was also procuring from Clutter an affidavit, couched in Downie's language, and in wording which Clutter, being of the character which Downie has ascribed to him, would readily adopt to procure the tendered compensation of one-half of the value of an excavator which he had purchased. Clutter signed the affidavit without the advice of counsel and under circumstances where he could not properly know or appreciate its effect. There is no room for the claim that Downie had obtained on the previous visit any such detail as set out in the affidavit of Clutter's view of what had transpired at Joplin.

The use of the words "experimentation" and "abandoned" in the affidavit it seems to me were particularly reprehensible under the circumstances of this case. The intention was to have Clutter swear to a statement which amounted to his saying that what he had done at Joplin was an abandoned experiment, and such has been the claim throughout this case. The words "experimentation" and "abandoned" embody legal conclusions in the patent law, and it was for the courts to say, after all of the evidence on both sides had been submitted, whether or not the work at Joplin was a mere experiment or whether Clutter had reduced to practice the conception or part of it which was afterwards embodied as an element of Downie's patent; and it was at all times a fairly debatable question whether there had been, not an abandoned experiment, but an abandonment to the public of a conception which had been reduced to practice. One has but to examine casually such cases as *Bush v. Novelty Tufting Machine Co.* (C. C. A. 6), 151 Fed. 478; *Jones v. Sykes Metal Etc. Co.* (C. C. A. 6), 254 Fed. 91, 94; *Corona Cord Tire Company v. Dovan Chemical Corporation, supra,* to arrive at this conclusion. And there had been a use of sufficient length to determine that Clutter's rearrangement of the parts adapted from the skimmer scoop would obviate the difficulties which both he and

Downie attempted to overcome. *Austin Machine Co. v. Buckeye Ditcher Co.* (C. C. A. 6), 13 F. (2d) 698.

In addition, by making payment of part of the compensation contingent upon the successful outcome of Downie's infringement litigation, the clear tendency of the contract was to keep Clutter silent, or, if he testified, to make him a witness hostile to claimed defendant infringers. The tendency of this type of contract to accomplish this purpose has long been recognized in the law. 3 *Williston on Contracts,* Sections 1716 and 1729; 2 *Page on Contracts,* Section 927; 6 *Ruling Case Law,* 755; 13 *C. J.* 448, 449.

The view of the courts sufficiently appears from the case of *Hazelton v. Sheckells,* 202 U. S. 71, at p. 79, where Mr. Justice Holmes said:

> "The objection to them rests in their tendency, not in what was done in the particular case. Therefore a court will not be governed by the technical argument that when the offer became binding it was cut down to what was done and was harmless. The court will not inquire what was done. If that should be improper it probably would be hidden and would not appear. In its inception the offer, however, intended, necessarily invited and tended to induce improper solicitations, and it intensified the inducement by the contingency of the reward. *Marshall v. B. & O. R. R.,* 16 How. 314, 335, 336."

We are here of course not interested so much in the formality of the contract or its illegality; we are interested in the conduct of Downie over the entire period of time involved in this litigation and the contract is only an incident of this conduct. The cases are cited to show what the courts have regarded as the tendency of such a contract, and this record clearly shows that Downie's intent and purpose were to keep Clutter silent, or, in the alternative, to make him a hostile witness as to the claimed defendant infringers. There is no doubt that because of the signing of the contract and the offer of the consideration partly contingent upon the litigation, Clutter was kept in a quiescent state until after the decree had been entered in the Cleveland case, and all of Downie's acts and efforts were designed to bring about that result.

Downie's counsel argued that the amount of compensation resulted from the fact that Downie left the first conference with Clutter at Lakewood, New Jersey,

under the impression that Clutter had an application pending in the patent office; that this was responsible for the large amount which was paid to Clutter; that he made a definite agreement at that time; and that he regarded himself as morally and legally bound to carry out this original agreement even if, as he afterwards learned from Clutter, he had no application pending in the patent office. Any one who had heard Downie testify over a period of time as this court did would not come to the conclusion that he would buy a "pig in a poke" as his counsel argued to the court. And even if the situation were in fact as Downie testified he believed it to be, the taking of the affidavit as he did would have been a reprehensible act, a fraud upon the courts who might subsequently consider the matter, a fraud upon subsequent claimed defendant infringers and upon the public who had a right to the benefit of the patent if it had in fact been abandoned to the public.

But the facts are not as testified to by Downie, as the undisputed exhibits in the case produced by the plaintiff clearly show. The preliminary, secret conference at the time that Elmire went to Lakewood with Downie was held long before the date suggested in Elmire's testimony. It was had before February 11, 1925, which is the date of Def. Ex. No. 95. It appears from that exhibit that no definite agreement of any kind had been made by Downie, and that he so understood the situation. It is clear from the testimony that Clutter at all times relied upon Downie to fix the terms of the agreement, whether oral or written, and to carry them out, and this was the fact from the inception of the transaction.

In Exhibit 95, dated February 11, 1925, and which was after the first trip to Lakewood, New Jersey, when Clutter was visited at his home, the Keystone Driller Company wrote to Clutter:

> "We are just now in receipt of a letter from Rex Downie in which he states that he has not definitely decided on the special considerations and the exact details, but he states that if you want to place your order for the shovel before he can reach a final conclusion, that we are to take your order on the basis of initial cash payment of $500; maximum time of 18 months for the balance."

This letter shows that while it had been agreed that Clutter was to have a credit upon an excavator which he was to purchase, there was no definite agreement as to

terms. And it appears from the record that Downie wanted Clutter to purchase the shovel and execute certain papers before any definite agreement was made, to the end that the books of the Keystone Driller Company would not disclose or give a key to the transaction between Downie and Clutter.

As already indicated Clutter purchased the excavator on the basis suggested in the letter. He executed Def. Ex. 96, which was the lease contract; he executed eighteen promissory notes, one for $515, and seventeen for $425, each; he executed Def. Ex. 101, which was a chattel mortgage covering the excavator; and on the 14th of April, 1925, two days before the signing of the affidavit, Def. Ex. 113, the seventeen notes were entered upon the bill receivable ledger, Pl. Ex. 74; and on that date the blanks were filled in on the chattel mortgage above the signature of Clutter; and, more significantly, on that date Downie made oath to the chattel mortgage that there was due upon it the sum of $7,740. If, as Downie now testifies, an agreement had been made on the first trip to Lakewood, there would have been due to Clutter one-fourth of the purchase price of the excavator, and Downie could not have made oath that here was due $7,740, which was the amount of the entire purchase price of the excavator less the $500 cash payment. The memorandum, Def. Ex. 98, which is said to have embodied the earlier oral agreement contains the following:

> "2. In consideration of the above, The Keystone Driller Company hereby conveys to Bernard Clutter a one-fourth ownership in that certain Keystone excavator with equipment as furnished to him under contract lease dated February 28, 1925 (Pl. Ex. 96 is referred to)."

If an earlier agreement was made, as testified to by Downie, then Clutter was entitled to a credit of $500 which he had paid in cash, plus a further credit of $2,060, and the amount due upon the notes secured by the chattel mortgage upon the date when Downie made oath was not $7,740, but $4,680.

There is no suggestion in the agreement, such as is claimed in Downie's affidavit, Def. Ex. 129, that Clutter was to receive his credits against the last payments due upon the excavator. That the first payment was not to be against the final notes due appears by what subsequently happened when credits were allowed to Clutter. The collection department of the Keystone Driller Com-

pany was pressing him for the payment of three notes, Def. Ex. 102, March 16, 1926. Evasively he advised the New York office that he was remitting direct. The testimony is that Downie had given the treasurer, Smith, a memorandum covering Clutter's credit for one-fourth of the purchase price of the machine, that through some oversight the same was not entered upon the books, and that Downie seemed surprised when the matter was called to his attention.[6]

This explanation might be accepted except for other evidence in the case when Clutter's initial credit was actually entered upon the books. It was made in the amount only of $1700, which is the precise amount which would be due upon the four notes due just about the time of this entry, and four notes were cancelled and surrendered to him covering the months of September, October, November and December, 1926, the entry having been made, as already seen, as of December 31, 1926. In fact there was more due to Clutter than the amount of $1700. Taking the original purchase price, there was due him $2,060. Taking the purchase price less the attachments, which were not received by Clutter, there was due him the sum of $1904. There was method in not entering upon the books of the company this particular amount which might later suggest investigation which would uncover the Downie-Clutter transaction with reference to the excavator. Smith, the treasurer, did not testify upon this subject, although he was at the place of business of the Keystone Driller Company and was available.

It is further argued that it could not have been the deliberate purpose of Downie to make an agreement to suppress the testimony of Clutter or to put him in a state of mind where he would testify in favor of the Keystone Company and along the lines of his affidavit because it would have been futile to make such an agreement with Downie alone when many others knew the facts; and the record shows that at least seven depositions were taken of witnesses who observed Clutter's work at Joplin. The fact is, however, that very few, if any, of these witnesses would have been able to testify about the details which they did unless their memory had been first refreshed by Clutter, as the record shows it was; and if Clutter showed no interest in bringing forth this testi-

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[6] The statement in Downie's affidavit, Def. Ex. 129, must be untrue, when he said: "Accordingly I made him a proposition to waive the *final* payments on such a machine."

mony, it would have been difficult to produce it from the other witnesses; and, more to the point, if there was any invention Clutter was the inventor, not Wallower or any one else, and Downie proceeded upon that theory. Whatever the witnesses observed and whatever they might be able to testify to, Clutter was the one man who could take the position and make an affidavit that the work at Joplin was an experiment and that it had been abandoned.

There is no issue here that Downie "surreptitiously or unjustly obtained a patent for that which was in fact invented by another who was using diligence in adapting and performing the same." R. S. 4920; 35 U. S. C. A. 69. But there is some evidence about what happened at Joplin which has a bearing upon the issue now under decision. *Holmes v. Goldsmith,* 147 U. S. 151, 164; *Williamson v. United States,* 207 U. S. 425, 450, 451.

Clutter testified that he told Oliver, then superintendent of the Joplin plant, in 1920, that he was about to apply for a patent, and that Oliver told him that Downie was working upon the same invention and had applied or was intending to apply for a patent and that the office did not know about it.

Shortly afterwards Clutter, who had left the employ of the Keystone Driller Company, was re-employed and sent to Trinidad, in the British West Indies.

Downie claims that he knew nothing of Clutter's work at Joplin until he was told by Hazen at a sales conference of the company at Beaver Falls, Pennsylvania; and counsel argue that the court is not entitled to draw any inference from the testimony to the effect that some one must have reported Clutter's work to the home office and that it must have come to the attention of Downie, from the failure of the plaintiff to call *all* of the persons who were then employees at the Joplin plant and who witnessed the excavating work at Joplin, Missouri; but it seems to this court that the fallacy of this position of plaintiff's counsel is that the one person who would have reported the matter directly to Downie, if it was so reported, was Oliver, if he in fact said what Clutter attributes to him. The record shows that Oliver is still in the employ of the plaintiff company at the Joplin plant. He was not called as a witness to deny Clutter's statement or to testify upon any subject, although he was available and Clutter's testimony was taken by depositions some time before the trial and the plaintiff was fully advised of Clutter's testimony and its import.

The further argument is advanced that Downie had no wrongful intent; that this is evidenced by the fact that after the signing of the affidavit, Def. Ex. 113, he assumed a dictatorial attitude toward Clutter in his dealings with him; and that if his intent had been to silence Clutter he would have assumed a more irenic attitude. If Downie did in fact assume such dictatorial attitude it seems to this court that this would be evidence in Downie's favor. It is necessary therefore to consider just what Downie did in his subsequent dealings with Clutter.

(a) It appears from the evidence that Downie left the first excavator purchased by Clutter in his possession until shortly prior to August 11, 1927. Pl. Ex. 75. Clutter had at that time paid on the excavator, the ultimate purchase price of which was $7,616, in cash only the sum of $2,290. Pl. Ex. 74. At the time of repossessing this excavator ten notes were overdue, the last one having been due December, 1926. Clutter of course had on December 31, 1926, received a credit of $1,700, representing part of the first instalment of the consideration which was due him. Thus it appears that Clutter had this excavator in his possession for a period of over two years, with only a cash payment of $2,290. It would seem that Downie was very lenient in this respect.

(b) Though the original agreement contemplated only credits upon the excavator purchased by Clutter, Downie before he repossessed the excavator made a new oral agreement with Clutter to pay him one-half of the balance of the contingent credit due him *in cash*, or the sum of $952. See Def. Ex. 104, Downie's memo. on the back of sheet 1; and Def. Ex. 107. This would seem to have been a fair agreement under the circumstances.

(c) According to the original agreement if the contingency with reference to the litigation did not occur on or before the 11th day of April, 1927, Clutter was entitled to no further payment. However Downie extended the time in which this contingency might occur to the end of the year 1928: Def. Ex. 107; Def. Ex. 38, third paragraph; Def. Ex. 39, next to the last paragraph.

(d) Although under no obligation to do so, Downie paid $476, or one-half of the substituted cash consideration, before the happening of the contingency. Def. Exs. 107 and 108.

(e) It appears from the evidence that since June 24, 1927, Clutter was indebted to the Keystone Company as

a balance on account in the amount of $663.38.[7] See Def. Exs. 94 and 38. No effort seems to have been made to collect this balance, and the company may also have absorbed a loss on the second excavator. Def. Ex. 109, third paragraph, last line.

All of these acts were in furtherance of the original wrongful purpose of the agreement between the parties. But from the point of view of Clutter—and with that alone we are here concerned—they were acts of benevolence.

It must also be noted that the record shows that Clutter reposed great confidence in Downie; that he always seemed to hope that Downie would assist him, even when Downie's letters indicated the contrary, and these letters sometimes contained gestures of friendship. Def. Ex. 38, last paragraph; Def. Ex. 110, next to the last paragraph. It must also be remembered that Clutter was impecunious and that the cash consideration of $952 and the last instalment of $476 were no insignificant amounts to him.

It is fair to say, however, that Downie seems to have dealt fairly with Clutter in money matters and that when he made an agreement he demanded its enforcement with business-like precision at the risk of antagonizing Clutter. His attitude in this respect may be explainable upon the theory that he thought that Clutter could do him no harm after he had signed the affidavit. However that may be, the firm attitude assumed by Downie is some evidence in his favor. It does not, however, to this court seem to be strong enough to overcome the other evidence which is clearly against him.

In my opinion no definite agreement, legal or moral, had been made with Clutter prior to April 16, 1925, when he signed the affidavit Def. Ex. 113, nor had it been agreed what Clutter was to sign, nor was Downie certain as to what he would in fact sign. The way had been prepared by having Clutter purchase the shovel, sign the contract lease, execute the chattel mortgage and the notes secured thereby, and Downie went to Lakewood hoping that Clutter would sign the affidavit, Ex. 113. From Downie's testimony it is fair to assume he believed that if Clutter made a written statement, and especially if he took oath thereto, he could not subsequently change his

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[7] If we consider that $476 was still due to Clutter and that he failed to receive the full amount of the credit which he was entitled to on December 31, 1926, when he was credited for $1,700, when there was due him $1,904, the accounts nearly balance; and it thus appears that Clutter was paid in full even though the litigation was not decided within the contingency period.

story [8] and that the transaction would thereafter be regarded for all purposes as being truly and correctly reflected in his written statement.

The evidence also shows that Clutter from the beginning took the position that he was the inventor,—a position which he constantly maintained until December 13, 1928, when he wrote Def. Ex. 111, saying in part:

> "The fact of the matter is I am the original inventor. This I know, and it was also admitted by you in your voluntary act of coming to me for a settlement without my demand or request."

Downie's answer under date of December 17, 1928, Def. Ex. 40, does not touch upon this point. If Clutter had insisted upon his position and maintained that he was the inventor and had refused to sign the affidavit, doubtless Downie would have had to be satisfied and would have entered into the transaction upon the basis of the signing of the agreement. Def. Exs. 98 and 114. The affidavit and the agreement it seems to me proceeded upon contrary and inconsistent theories.

The intent and purpose prevading all of Downie's conduct in his transaction with Clutter was to keep him silent or, in the alternative, to place him in such a position that he would not be interested in taking, and would not take, a position as a witness hostile to Downie's interests which he had made his own.[9]

Was Any Fraud Sought to be Perpetrated Upon This Court in the Trial of These Cases?

Plaintiff's counsel, who have at all times had implicit confidence in Downie, and who do not agree with this court's analysis of the testimony, further urge that if there was any agreement or conduct on Downie's part, as I have already indicated, the force and effect of the

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[8] In his affidavit, Def. Ex. 129, Downie said: "I was interested that the facts which he reported to me about the Joplin experiment and the Joplin work and which I reported to my patent lawyer should be preserved as I did not want him later to change his story."

[9] It is necessary to study the exhibits relating to this issue in their chronological order. So arranged as nearly as possible they are as follows: Def. 95, 96, 97, 37, 98, 114, 99; Pl. 74; Def. 101, 113; Pl. 73; Def. 100, 41, 27, 102, 103; Pl. 75; Def. 104, 105, 106, 107, 108, 109, 38, 110, 39, 111, 40; Pl. 45, 46; Def. 112, 129, 65; an undated ledger account Def. 93 and 94. The dates of the Cleveland case are as follows: December 22, 1926, bill of complaint filed; September 15, 1927, Judge Westenhaver began the taking of testimony; testimony completed September 19, 1927. Judge Westenhaver died about July 30, 1928, after an illness of several months. His successor took office December 28, 1928. Judge Jones rendered his decision January 23, 1929. A final decree was entered January 31, 1929.

same were spent in the Byers case; and that, in these cases, the court should disregard the acts and conduct of Downie, especially so when it comes to a consideration of the merits of these cases.

As already seen, after the conclusion of the Byers case Clutter communicated with Mr. Fay and perhaps others and offered to sell his testimony for a large sum of money. About this time also B. C. Clutter, a brother of Bernard R. Clutter, and George E. Wagner made propositions to the Keystone Driller Company which had a blackmailing aspect. Thereupon a meeting of all plaintiff's counsel was had at Beaver Falls, Pennsylvania, and letters were written to Wagner and B. C. Clutter. They are Pl. Exs. 45 and 46 and, while in a certain sense they are written for record purposes, we think counsel and the officials of the Keystone Company were in good faith when they said that they would offer or give nothing to conceal or suppress any evidence in these cases or in any other cases. From that point on, at least, this matter was in other hands than Downie's and I do not think that any one would impute an intention to plaintiff's counsel to suppress evidence in these cases.

Coming now to what transpired in these cases. The usual motion for a temporary injunction was filed, plaintiff's counsel at that time urging the binding effect of the Byers case as to the patents involved in that case. The application was opposed by defendants' counsel with a broad claim of new defenses and much new prior art. The court was then much impressed with the extent of these new defenses and the additional evidence as to the prior art. I denied the motion for a temporary injunction and allowed defendants to file a bond in lieu of granting the temporary injunction. No appeal was taken from this decision. In the circumstances I do not think that urging the binding effect of the decision in the Byers case was in any sense a fraud upon this court, even if there had been suppression in the Byers case of such a nature that this court should notice it as having a bearing when it comes to a decision of the merits of these cases. The matters relating to a preliminary injunction are a closed incident so far as the merits of the case are concerned.

Coming now to what transpired on the merits of the case. Clutter's first deposition was taken on February 24, 1930, and judging from the examination in chief defendants' counsel were not at that time apprised of the agreements which were afterwards produced in evidence.

A clew to them came because plaintiff's counsel asked questions with reference to Def. Ex. 27, a letter, and asked Clutter to identify his signature to the affidavit, Def. Ex. 113. The deposition leaves the impression that Clutter had not made up his mind at that time to testify concerning the agreement which he had with Downie. Thereafter, on the 21st day of October, 1930, the second Clutter deposition was taken. This covers Clutter's view with reference to the suppression of testimony; but the exhibits were not then available to defendants' counsel. December 15, 1930, defendants' counsel filed a motion to compel the production and to permit the inspection of documents relating to the alleged suppression of testimony. February 2, 1931, this court entered an order dismissing the motion without prejudice, it being agreed at that time by plaintiff's counsel that they would produce all of the documents at the trial, and that Mr. Downie, perhaps also Mr. Elmire, would be produced as witnesses. Upon the first day of the trial the documents were produced and the defendants' counsel had ample opportunity to examine them, but they stated that they were unable to procure Clutter's attendance as a witness at the trial, which of course was no fault of plaintiff's counsel. In these cases defendants' counsel had the testimony of Clutter when he was hostile to the plaintiff. They had all of the exhibits which have been commented upon herein and which tell the entire story with more accuracy than any witness who could testify with reference to them. There was in no sense a suppression of any evidence in these cases.

The position of plaintiff's counsel has been (a) that the testimony did not show any suppression of evidence in the Byers case; (b) that if the testimony in these cases showed an actual suppression of evidence in the Byers case, the court should still give to the decision in that case the full binding effect to which it was entitled because the evidence which was suppressed, if it was suppressed, related to an abandoned experiment.

This court had before it all of the facts, and in making the contentions which they did, it does not seem to this court that plaintiff's counsel exceeded the bounds of proper argument, and there was no fraud or suppression of evidence whatsoever in these cases. To hold that the plaintiff came into this court with unclean hands would be unwarranted. To use the language of another court when denying the application of another maxim: "To hold otherwise and to apply to this case the maxim

* * * would be to exercise rigor beyond the limits of wholesome severity." *Harvey v. Varner,* 98 Mass. 118, 123.

Having come to this conclusion it is unnecessary for this court to decide what should have been done or what might have been done in the Byers case, had the courts there had before them the facts which I have had before me in these cases; and it is not necessary to comment upon or to review the voluminous legal lore bearing upon the maxim which has been invoked.

In addition to the cases cited by counsel, I call their attention to the following, which seem to be in point: *Harton v. M'Kee,* 73 Fed. 556; and *Primeau v. Granfield,* 180 Fed. 847. In the latter case Judge Learned Hand said at page 180:

> "It is true that the law will enforce no part of a contract the performance of any stipulation of which is forbidden, but the parties do not become outlaws when they make such a contract, and their rights in equity as well as at law are the same as those of others, in so far as they do not require the enforcement of any part of the contract."

This case was reversed, 193 Fed. 911, and certiorari denied, 225 U. S. 708.

Professor John H. Wigmore, author of *Wigmore on Evidence,* has called my attention to 2 *Wigmore on Evidence,* Section 958; 4 *Wigmore on Evidence,* Section 2203, Note 6; *MaMath v. Hammond,* 55 Ga. 303; *Keown v. Verlin* (Mass.), 149 N. E. 116; and *Thatcher v. Darr,* 27 Wyo. 452, 199 Pac. 938.

Without deciding whether or not the Joplin work was an anticipation, I find and hold the first Downie patent, No. 1,511,114 to be valid and infringed.

These are the conclusions of this court if the decision in the Byers case stands. Much activity of counsel in the other cases indicates a probability that steps may be taken in the Byers case analogous to those which were taken in *Gairing Tool Co. v. Eclipse Interchangeable Counterbore Co.* (C. C. A. 6), 48 F. (2d) 73. No decree will be entered in this case at the present time. If within a reasonable time no steps are taken to set aside or modify the decision in the Byers case, an order may be entered in this case in accordance with this opinion. Costs are to be paid by the defendants.

GEO. P. HAHN,
District Judge.

June 22, 1931.

MOTION AND ORDER GRANTING PLAINTIFF LEAVE TO FILE CHART OF DOWNIE PATENT 1,709,466 AS PLAINTIFF'S EXHIBIT P-77.

(Filed June 26, 1931.)

[Case No. 964]

Now comes the plaintiff and moves this Honorable Court that the large wash drawing mailed to Toledo June 17, 1931 which illustrated the assembly of the plaintiff's bucket and stick depicting the structure of Downie Patent No. 1,709,466 may be and is hereby introduced and entered as Plaintiff's Exhibit P-77 in the above entitled cases.

Cleveland, Ohio
June 24, 1931.

RICHEY & WATTS,
Attorneys for Plaintiff.

It is so ordered June 26th, 1931.

GEO. P. HAHN,
United States District Judge.

REQUEST FOR FINDINGS OF FACT AND CONCLUSIONS OF LAW.

(Filed July 15, 1931.)

[Case No. 964]

Defendant requests that the Court enter in this case special findings of fact and conclusions of law in the form attached hereto.

EDWARD L. REED,
Solicitor.

Copy of this request with the enclosed findings of fact and conclusions of law attached thereto has been mailed this day to Richey & Watts, 1090 Union Trust Building, Cleveland, Ohio, Counsel for the plaintiff.

Dated July 14, 1931.

EDWARD L. REED.

FINDINGS OF FACT AND CONCLUSIONS OF LAW.

(Filed July 15, 1931.)

[Case No. 964]

This cause coming on to be heard at this term of Court, and upon pleadings and proofs presented, and the Court having heard the arguments of counsel and being fully advised, now makes the following Findings of Fact and Conclusions of Law:

FINDINGS OF FACT.

1. That Le Roy P. Clutter Patent, No. 1,317,431, dated September 30, 1919, having been held valid by the Circuit Court of Appeals of this Circuit, in *Byers Machine Company vs. Keystone Driller Company,* 44 F. 2d. 283, as to Claim Four (the claim in suit here), though new and impressive evidence has been offered in this case, it is deemed more fitting and proper by this Court that this new evidence and new arguments should be addressed to the Circuit Court of Appeals.

2. That Robert Rex Downie Patent, No. 1,511,114, dated October 7, 1924, is claimed to have been anticipated by the work of one Bernard R. Clutter done at Joplin, Missouri, in the fall of 1919 and the early months of the year 1920. As to whether or not this work anticipates the Downie Patent, the Court does not think it should determine for the same reason which it has given herein, in considering the Clutter patent, No. 1,317,431. New evidence is here presented as to this claimed anticipation. The new matter can be more properly and more fittingly presented to the Circuit Court of Appeals.

3. That Bernard R. Clutter, while working on the excavation of a cellar at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920, made and used an instroke ditcher with a drop bottom scoop, prior to any invention thereof by Robert Rex Downie, patentee of United States Letters Patent No. 1,511,114. The construction of this instroke ditcher with drop bottom scoop thereon is shown in Defendant's Exhibits, No. 26.

4. That the Keystone Driller Company had knowledge of this Bernard R. Clutter drop bottom instroke ditcher at the time it was made and used by Bernard R. Clutter at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920.

5. That Robert Rex Downie, patentee of Downie patent No. 1,511,114, had knowledge of this Bernard R. Clutter drop bottom instroke ditcher before he filed application for Downie patent No. 1,511,114, in suit.

6. That Downie patent No. 1,511,114 was assigned to the Plaintiff Company and issued on October 7, 1924. That upon issuance of this patent, the Plaintiff Company contemplated bringing suits against various alleged infringers. That having this purpose in mind, the Plaintiff Company, through its General Manager, Robert Rex Downie, voluntarily called upon Bernard R. Clutter at his home in Lakewood, New Jersey, in the latter part of the year 1924 or the early part of the year 1925. That the witnesses, Bernard R. Clutter and Robert Rex Downie, admit that the occasion for this visit was to discuss the public use by Bernard R. Clutter of his drop bottom instroke ditcher at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920.

7. That Bernard R. Clutter testified (and his testimony is supported by the documentary proofs), that Robert Rex Downie, during a visit to Lakewood, New Jersey, proposed to him that, as Keystone Driller Company were contemplating suits against infringers, they wanted Clutter to keep silent about his public use of the instroke ditcher with the drop bottom at Joplin, Missouri, and that, in consideration of his agreeing to do this, the Plaintiff Company would deliver to him a Keystone Excavator valued at $8,240, and credit him with a sum equal to one-half (½) the purchase price of said machine, one-quarter (¼) credit to be given him upon delivery of the machine and one-quarter credit upon the successful termination of the litigation then in contemplation.

8. That Bernard R. Clutter accepted the proposition and delivery of the Keystone Excavator was made by the Plaintiff Company. The suits contemplated by the Plaintiff Company were filed and the first of the credits promised Bernard R. Clutter for his silence was issued to him. During the pendency of these suits Bernard R. Clutter and the plaintiff Company had a disagreement about back payments due upon this Excavator. The plaintiff Company then agreed that, if it should repossess the machine, then in lieu of the second merchandise credit previously promised him, it would allow him a cash credit of $1,904. Clutter agreed to this and part of the cash credit, namely, $476, was actually paid Clutter. Clutter pressed Keystone for the balance of this cash amount but

Keystone, through its General Manager, Robert Rex Downie, kept putting him off until the litigation then pending against the Byers Company at Cleveland, Ohio, was decided in favor of the Keystone Driller Company.

9. That this suit was filed February 9, 1929, and plaintiff came into this Court urging the binding effect against this Defendant of the decision rendered in the Byers case, obtained by fraud and suppression of evidence.

10. That this suit was filed February 9, 1929, and that plaintiff came into this Court asserting that Robert Rex Downie was the first, true and original inventor of Downie patent No. 1,511,114, in suit while it had in its files information and then had knowledge that the true inventor was Bernard R. Clutter and had, previous to and at the time of filing this suit, a corrupt agreement with Bernard R. Clutter to suppress the true facts as to the inventorship of said alleged invention.

11. That, at the time of filing this suit and thereafter plaintiff knew Downie patent No. 1,511,114 to be invalid in view of the public use by Bernard R. Clutter at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920.

12. That alleged letters of repudiation written to Wagner and B. C. Clutter on April 12, 1929 (Plaintiff's Exhibits 45 and 46) were written and forwarded several months after this suit was filed and that said letters were never called to Defendant's attention or knowledge until a year and ten months after this suit was filed, and not until defendant, without knowledge of these letters, had, by its own efforts, uncovered the attempted fraud and suppression attempted to be perpetrated by plaintiff upon this defendant.

13. That said alleged letters of repudiation (Plaintiff's Exhibits 45 and 46) were not constructive notice to this defendant, and that so far as this defendant was concerned, the attempted fraud and suppression of evidence were effective against this defendant until uncovered by defendant's own efforts.

CONCLUSIONS OF LAW.

1. That the plaintiff, Keystone Driller Company, is by assignment the lawful owner of Letters Patent of the United States, as follows, to-wit:

Le Roy P. Clutter Patent, No. 1,317,431, dated September 30, 1919, for Ditching or Excavating Machine;

Robert Rex Downie Patent, No. 1,511,114, dated October 7, 1924, for Excavating Machine;

Robert Rex Downie Patent, No. 1,543,250, dated June 23, 1925, for Excavating Machine;

Robert Rex Downie Patent, No. 1,709,466, dated April 16, 1929, for Ditcher Scoop Assembly;

Robert Rex Downie Patent, No. 1,716,432, dated June 11, 1929, for Excavating Scoops.

2. Clutter Patent No. 1,317,431, dated September 30, 1919, is held to be valid and infringed as to Claim 4.

3. The first Downie patent No. 1,511,114, dated October 7, 1924, is held to be valid and infringed as to Claims 6 to 14, both inclusive.

4. That Robert Rex Downie Patent No. 1,543,250, dated June 23, 1925, is good and valid in law as construed by this Court as to Claims 1, 2, 3, 4, 5, 5, 6, 9 and 10, but Claims 1, 2, 3, 4, 5, 6, 9 and 10 are not infringed by defendant's structure, and the charge of infringement relative thereto is hereby dismissed.

5. That Robert Rex Downie Patent, No. 1,709,466, dated April 16, 1929, is lacking in patentable invention as to Claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 thereof; that if there is patentable invention in the Claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 of said Letters Patent No. 1,709,466, Defendant's machine does not infringe said Claims.

6. That Robert Rex Downie Patent, No. 1,716,432, dated June 11, 1929, is good and valid in law as construed by this Court as to claims 1, 14, 16 and 18, and said claims 1, 14, 16 and 18 are infringed by the side rake tooth shown in defendant's physical Exhibit No. 82.

7. That the intent and purpose pervading all of Downie's conduct in his transactions with Bernard R. Clutter as set forth above in the Findings of Fact was to keep Clutter silent, or in the alternative, to make him a hostile witness as to the claimed defendant infringers. There is no doubt that, because of the signing of the contract and the offer of the consideration partly contingent upon the litigation, Clutter was kept in a quiescent state until after the decree had been entered in the case of Keystone Driller Company v. Byers Machine Company, in the United States District Court for the Northern District of Ohio, Eastern Division, at Cleveland, Ohio, herein sometimes referred to as the Cleveland case or as the Byers case, and all of Downie's acts and efforts were designed to bring about that result.

8. That there was no fraud or suppression of evidence by plaintiff in this case.

9. That the plaintiff, through its General Manager, Downie, suppressed the evidence of the Bernard R. Clutter's Joplin public use of the instroke ditching machine with the drop bottom scoop, during the trial of the Cleveland case against the Byers Company, and at the same time this suit was filed, such suppression was still effective.

10. That the conduct of the plaintiff Company, through its General Manager, Downie, in making a corrupt agreement with Bernard R. Clutter for the suppression of the Bernard R. Clutter evidence of the Joplin public use of the instroke ditcher having a drop bottom, while still effective when this suit was filed, does not constitute unclean hands in this suit to bar the Plaintiff from equitable relief.

11. That the plaintiff is not guilty of unclean hands in this suit by reason of its agreement with Bernard R. Clutter to suppress evidence.

12. That all of the evidence relative to the work of Bernard R. Clutter at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920 in making and using the instroke ditcher machine having a drop bottom bucket, is very material and relevant to this case, and that Robert Rex Downie, when General Manager of the plaintiff Company, made agreements whose tendency was to suppress this evidence, and by his acts and conduct intended to and did suppress evidence relating to the Joplin work of Clutter.

13. That the Court declines to hold what effect this suppression of evidence had on the Byers case in the District Court and in the Circuit Court of Appeals.

14. That the Court declines to hold that because of the suppression of evidence in the Byers case, this Court should not consider the Byers case as having any binding effect in this case.

Entered this .... day of July, 1931.

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United States District Judge.

INTERLOCUTORY DECREE.

(Filed July 21, 1931.)

[Case No. 964]

This cause coming on to be heard at this term of Court, and upon pleadings and proofs presented and arguments by both parties, the court having filed its opinion which sufficiently finds the facts and the law, and thereupon, upon consideration thereof, it is Ordered, Adjudged and Decreed as follows:

(1) That Letters Patent of the United States to LeRoy P. Clutter, No. 1,317,431, dated September 30, 1919, for Ditching or Excavating Machine, is good and valid in law as to claim 4 thereof; that the inventor, LeRoy P. Clutter, named in the said patent, was the first, true and original inventor of the inventions, improvements and combinations described in said claim 4; and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to the Letters Patent therefor, as aforesaid;

That Letters Patent of the United States to Robert Rex Downie, No. 1,511,114, dated October 7, 1924, for Excavating Machine, is good and valid in law as to claims 6 to 14, both inclusive; that the inventor, Robert Rex Downie, named in the said patent, was the first, true and original inventor of the inventions, improvements and combinations described in said claims 6 to 14, both inclusive, thereof, and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to the said Letters Patent therefor, as aforesaid;

That Letters Patent of the United States to Robert Rex Downie, No. 1,543,250, dated June 23, 1925, for Excavating Machine, is good and valid in law as to claims 1, 2, 3, 4, 5, 6, 9 and 10; that the inventor, Robert Rex Downie, was the first, true and original inventor of said inventions, improvements and combinations described in said claims 1, 2, 3, 4, 5, 6, 9 and 10 of said patent, and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to said Letters Patent therefor, as aforesaid; that the structure of the Defendant's machine does not infringe claims 1 to 6 inclusive and 9 and 10 of said patent;

That Letters Patent of the United States No. 1,709,466, dated April 16, 1929, to Robert Rex Downie, for Ditcher Scoop Assembly, lacked patentable invention as to claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 thereof; that if there is patentable invention in said Letters Patent No. 1,709,466 as to claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 the structure of Defendant's machine illustrated in Defendant's Exhibit 81 would not infringe said claims of said patent.

That Letters Patent of the United States No. 1,716,432, dated June 11, 1929, for Excavating Scoop, is good and valid in law as to claims 1, 14, 16 and 18 thereof; that the inventor, Robert Rex Downie, named in said patent, was the first, true and original inventor of the inventions, improvements and combinations described in said claims 1, 14, 16 and 18 of said patent, and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to the Letters Patent therefor, as aforesaid.

(2) That the Defendant, The General Excavator Company, has infringed upon said Letters Patent to Clutter, No. 1,317,431, Downie, No. 1,511,114 and Downie, No. 1,716,432 within the Northern District of Ohio, Western Division, and elsewhere in the United States, by the manufacture, sale and/or use of Ditching or Excavating Machines, employing or embodying the inventions set forth in certain of said patents and particularly upon claim 4 of patent No. 1,317,431, by the manufacture, sale and/or use of machines illustrated in Plaintiff's Exhibit P-25, Bulletin 2805 on page 2, center view; page 9, top and lower right-hand cuts; pages 10 and 11, lower right-hand and central views; page 19, right-hand cuts; Photographs A, B, C, D, E, and I of Plaintiff's Exhibit P-27; Photographs K and L of Plaintiff's Exhibit P-28; and Excavating Machines employing and embodying the inventions set forth in patent No. 1,511,114 and particularly upon claims 6 to 14, both inclusive, thereof, by the manufacture, sale and/or use of machines and/or apparatus illustrated in Plaintiff's Exhibit P-25, Bulletin 2805 on page 2, center view and page 9, top and lower right-hand cuts; Plaintiff's Exhibit P-27, Photographs A, B, C, F, G and I; Plaintiff's Exhibit P-28, Photographs L and M, and Excavating Scoops employing and embodying the inventions set forth in patent No.

1,716,432 and particularly upon claims 1, 14, 16 and 18 thereof, by the manufacture, sale and/or use of apparatus illustrated in Plaintiff's Exhibit P-27, Photographs A, B, C, F, G and I and Plaintiff's Exhibit P-28, Photographs L, R and S.

(3) That the Plaintiff do recover from the Defendant, The General Excavator Company, all profits, gains and advantages which the Defendant has or shall have derived, received or made by reason of said infringement and that the Plaintiff do recover from said Defendant, any and all damages which the Plaintiff has sustained or shall sustain by reason of said infringement by said Defendant.

(4) That this cause be, and the same is hereby referred to J. W. Wilson, Esq., a Master, to ascertain the amount of such gains and profits and the amount of damages sustained by the said Plaintiff by reason of such infringement; that the Defendant file its account with said Master in accordance with the Rules of Equity of the Supreme Court of the United States relevant thereto; that on such accounting the Plaintiff shall have the right to cause an examination of the officers, servants, agents and employees of said Defendant, orally or otherwise, and also to cause the production of the Defendant's books, vouchers, accounts, bills of lading, shop orders and all documents relating to the manufacture of ditchers and parts thereof by Defendant, and that said Defendant, through its representatives, attend for such purpose before the Master from time to time as the said Master shall direct, and that all testimony and exhibits offered and used in this cause on behalf of either party may be referred to and used in such accounting.

(5) That an injunction be issued out of and under the seal of this Court, directed to the Defendant, The General Excavator Company, its officers, servants, agents, employees, workmen and all their privies, and each and every one of them, enjoining and restraining them during the remainder of the respective terms of said Letters Patent Nos. 1,317,431, 1,511,114, and 1,716,432 from directly or indirectly constructing or causing to be constructed and/or using and/or selling or causing to be used or sold or advertising for sale, Ditching or Excavating Machines, employing or embodying the inventions set forth in certain of said patents and particularly upon claim 4 of patent No. 1,317,431, by the manufacture, sale and/or use of machines like apparatus illus-

trated in Plaintiff's Exhibit P-25, Bulletin 2805 on page 2, center view; page 9, top and lower right-hand cuts; pages 10 and 11, lower right-hand and central views; page 19, right-hand cut, Photographs A, B, C, D, E and I of Plaintiff's Exhibit P-27; Photographs K and L of Plaintiff's Exhibit P-28, and Excavating Machines employing and embodying the inventions set forth in Patent No. 1,511,114 and particularly upon claims 6 to 14, both inclusive, thereof, by the manufacture, sale and/or use of machines like apparatus illustrated in Plaintiff's Exhibit P-25, Bulletin 2805 on page 2, center view; page 9, top and lower right-hand cuts; pages 10 and 11, lower right-hand and central views; page 19, right-hand cut; Photographs A, B, C, D, E and I of Plaintiff's Exhibit P-27; Photographs K and L of Plaintiff's Exhibit P-28, and Excavating Machines employing and embodying the inventions set forth in Patent No. 1,511,114 and particularly upon claims 6 to 14, both inclusive, thereof, by the manufacture, sale and/or use of machines like apparatus illustrated in Plaintiff's Exhibit P-25, Bulletin 2805 on page 2, center view, and page 9 top and lower right-hand cuts; Plaintiff's Exhibit P-27, Photographs A, B, C, D, G and I; Plaintiff's Exhibit P-28, Photographs L and M, and Excavating Scoops employing and embodying the inventions set forth in patent No. 1,716,433, and particularly upon claims 1, 14, 16 and 18 thereof, by the manufacture, sale and/or use of devices like apparatus illustrated in Plaintiff's Exhibit P-27, Photographs A, B, C, F, G and I, and Plaintiff's Exhibit P-28, Photographs L, R and S, or apparatus, article, devices, ditching or excavating machines or excavating scoops to be used or capable only of use in a combination infringing any of said patents, and from infringing and contributing to infringement upon or violating any of said Letters Patent in any way whatsoever.

(6) The injunction and accounting herein ordered be suspended for ten (10) days from this date in order that Defendant may perfect its appeal. In view of the contemplated appeal the supersedeas bond is hereby fixed at $7500.00 with sureties and conditions to be approved by the judge who allows the appeal.

(7) That Plaintiff recover from the Defendant the Plaintiff's full cost in this suit to be taxed and to have execution therefor.

Entered this 21st day of July, 1931.

GEO. P. HAHN,
United States District Judge.

PETITION FOR APPEAL.

(Filed July 28, 1931.)

[Case No. 964]

The above named defendant, The General Excavator Company, feeling aggrieved by the decree rendered and entered in the above entitled cause on the 21st day of July, A. D. 1931, does hereby appeal from said decree to the Circuit Court of Appeals for the Sixth Circuit for the reasons set forth in the assignment of errors filed herewith, and it prays that its appeal be allowed and that citation be issued as provided by law, and that a transcript of the record, proceedings and documents upon which said decree was based, duly authenticated be sent to the United States Circuit Court of Appeals for the Sixth Circuit, under the rules of such court in such cases made and provided.

And your petitioner desires said appeal shall operate as a supersedeas, and therefore prays that an order be made fixing the amount of security which said defendant shall give and furnish upon such appeal, and that upon giving such security all further proceedings in this court be suspended and stayed until the determination of said appeal by the Circuit Court of Appeals for the Sixth Circuit.

EDWARD L. REED,
Attorney for Defendant.

Dated July 28th, 1931.

ASSIGNMENT OF ERRORS.

(Filed July 28, 1931.)

[Case No. 964]

Now comes the defendant, The General Excavator Company, and presents, with its accompanying petition for appeal from the decree entered herein, the following assignment of errors:

1. That the Court erred in finding that Letters Patent No. 1,317,431 to Clutter are good and valid in law as to claim 4 thereof.

2. That the Court erred in finding that the defendant, The General Excavator Company, had infringed claim 4 of patent No. 1,317,431 to Clutter.

3. That the Court erred in following the decision of the Circuit Court of Appeals in The Byers Machine Co. vs. Keystone Driller Co., 44 Fed. 2nd. 283, as to validity of claim 4 of Letters Patent No. 1,317,431 to Clutter.

4. That the Court erred in not finding that the additional evidence in the instant case was such in character and amount as to carry conviction that the Court of Appeals would have reached a different conclusion as to the validity of claim 4 of patent No. 1,317,431 to Clutter if said evidence had been before that court in the case of The Byers Machine Co. vs. The Keystone Driller Company.

5. That the Court erred in not finding that the Daniel H. Mahoney machine used at Vincennes, Indiana, and Gorham, Illinois, in 1913, was a complete anticipation of claim 4 of the Clutter patent No. 1,317,431.

6. That the Court erred in finding Letters Patent No. 1,511,114 to Downie good and valid in law as to claims 6 to 14, both inclusive.

7. That the Court erred in finding that the defendant, The General Excavator Company, had infringed claims 6 to 14, both inclusive of Letters Patent No. 1,511,114 to Downie.

8. That the Court erred in following the decision of the Circuit Court of Appeals in The Byers Machine Co. vs. The Keystone Driller Company as to the validity of claims 6 to 14 of Letters Patent No. 1,511,114 to Downie.

9. That the Court erred in not finding that the additional evidence in the instant case is such in character and amount as to carry conviction that the Circuit Court of Appeals would have reached a different conclusion as to the validity of claims 6 to 14, both inclusive, of patent No. 1,511,114 to Downie, if said additional evidence had been before that court in The Byers Machine Co. vs. The Keystone Driller Co.

10. That the Court erred in not finding that the drop bottom excavating scoop used at Joplin, Missouri, by Bernard R. Clutter was a complete anticipation of claims 6 to 14, both inclusive, of Letters Patents No. 1,511,114 to Downie.

11. That the Court erred in not finding that the plaintiff came into this Court with unclean hands by reason of the suppression of testimony by the plaintiff in the case of The Byers Machine Co. vs. The Keystone Driller Co., and the attempted suppression of evidence by the plaintiff in the instant case.

12. That the Court erred in not finding that by reason of the suppression of evidence by the plaintiff in the case of The Byers Machine Co. vs. The Keystone Driller Company, the decision of the Court of Appeals in that case was without effect and was not binding on this Court in the instant case.

13. That the Court erred in finding that Letters Patent No. 1,543,250 to Downie was good and valid in law as to claims 1, 2, 3, 4, 5, 6, 9 and 10.

14. That the Court erred in finding that Letters Patent No. 1,716,432 to Downie was good and valid in law as to claims 1, 14, 16 and 18.

15. That the Court erred in finding that the Defendant, The General Excavator Company, had infringed claims 1, 14, 16 and 18 of Letters Patent No. 1,716,432 to Downie.

16. That the Court erred in that it awarded a permanent injunction enjoining defendant, The General Excavator Company, its officers, servants, agents, employees, workmen and all their privies from constructing or causing to be constructed, and/or using, and/or selling, and/or causing to be used or sold, or advertising for sale, machines embodying the invention of claim 4 of the Clutter patent No. 1,317,431, of claims 4 to 16, both inclusive, of Downie patent No. 1,511,114, and claims 1, 14, 16 and 18, of Downie patent No. 1,716,432.

17. That the Court erred in finding that the plaintiff should recover from the defendant, The General Excavator Company, all profits, gains and advantages which the defendant has, or shall have derived, by reason of infringement by said defendant of claim 4 of the Clutter patent No. 1,317,431, claims 6 to 14 of the Downie patent No. 1,511,114, and claims 1, 14, 16 and 18 of the Downie patent No. 1,716,432, and any and all damages which the plaintiff has sustained or shall sustain by reason of such alleged infringement.

18. That the Court erred in appointing a Master to take an account of the gains and profits which have

accrued to the defendant and the damages suffered by the plaintiff on account of said infringement.

19. That the Court erred in that it did not dismiss the bill of complaint.

WHEREFORE, the defendant prays that said decree may be reversed.

THE GENERAL EXCAVATOR COMPANY,
By EDWARD L. REED,
Solicitor for Defendant.

ORDER ALLOWING APPEAL AND GRANTING SUPERSEDEAS.

(Entered July 29, 1931 by Paul Jones, Judge.)

[Case No. 964.]

The petition of The General Excavator Company, defendant in the above entitled cause, for an appeal from the decree is hereby granted and the appeal is allowed; and upon petitioner filing a bond in the sum of Seven Thousand Five Hundred ($7,500.00) Dollars with sufficient sureties, and conditioned as required by law, the same shall operate as a supersedeas of the decree made and entered in the above cause, and shall suspend and stay the injunction and accounting and all further proceedings in this Court until the termination of said appeal by the Circuit Court of Appeals for the Sixth Circuit.

Dated 29th day of July, 1931.

PAUL JONES,
United States District Judge.

SUPERSEDEAS BOND ON APPEAL.

(Filed July 29, 1931.)

[Case No. 964]

UNITED STATES OF AMERICA,
NORTHERN DISTRICT OF OHIO,
WESTERN DIVISION, SS:

KNOW ALL MEN BY THESE PRESENTS, that we, The General Excavator Company, of Marion, in the County of Marion, and State of Ohio, as principal, and the United States Fidelity & Guaranty Company of the City of Baltimore and State of Maryland, as surety, are held and firmly bound unto The Keystone Driller Company in the sum of Seventy-five Hundred ($7,500.00) Dollars, lawful money of the United States, to be paid to said The Keystone Driller Company, its successors or assigns; to which payment, well and truly to be made, we bind ourselves and each of us, jointly and severally, and each of our successors and assigns, by these presents.

Sealed with our seals and dated this 28th day of July, 1931.

WHEREAS, lately, at a term of the United States District Court for the Northern District of Ohio, Western Division, in a suit pending in said Court, between The Keystone Driller Company, Plaintiff, and The General Excavator Company, Defendant, a decree was entered and the said The General Excavator Company has obtained an order of said Court allowing an appeal to reverse portions of the aforesaid decree, and a citation directed to said The Keystone Driller Company citing and admonishing it to be and appear in the United States Circuit Court of Appeals for the 6th Circuit at the City of Cincinnati, Ohio,

Now the condition of the above obligation is such, that if the said The General Excavator Company shall prosecute said appeal to effect, and pay all costs and damages if it fail to make good its plea, then this obligation to be void. Otherwise the same shall be and remain in full force and effect.

THE GENERAL EXCAVATOR COMPANY,
By M. C. MCNEIL,
Secretary.

UNITED STATES FIDELITY & GUARANTY CO.,
By LOUIS H. PAINE,
Attorney in Fact (Seal)

Approved this 29th day of July, 1931, and when filed will operate as a supersedeas.

PAUL JONES,
United States District Judge

CITATION ON APPEAL.

(Filed July 29, 1931.)

[Case No. 964]

UNITED STATES CIRCUIT COURT OF APPEALS
FOR THE SIXTH CIRCUIT.

To Keystone Driller Company, Greeting:

You are hereby cited and admonished to be and appear at a session of the United States Circuit Court of Appeals for the Sixth Circuit, to be holden at the City of Cincinnati, in said circuit, on the *28th day of August, 1931, next, pursuant to an order allowing an appeal filed in the Clerk's office of the District Court of the United States for the Northern District of Ohio, wherein The General Excavator Company is appellant and you are appellee to show cause, if any there be, why the decree rendered against the said appellant as in the said appeal mentioned, should not be corrected, and why speedy justice should not be done to the parties in that behalf.

WITNESS, the Honorable CHARLES EVANS HUGHES, Chief Justice of the United States, this 29th day of July in the year of our Lord one thousand nine hundred and thirty-one and of the Independence of the United States of America the one hundred and fifty-sixth.

PAUL JONES,
Judge of the District Court.

*Not exceeding 30 days from day of signing.

Service of the above citation is hereby acknowledged and appearance of appellee is hereby entered.

July 29, 1931. RICHEY & WATTS.

PETITION FOR CROSS-APPEAL.

(Filed Aug. 7, 1931.)

[Case No. 964]

To the Honorable, the Judges of the District Court of the United States for the Northern District of Ohio, Western Division:

Your petitioner, the Keystone Driller Company, Plaintiff in the above entitled cause, respectfully shows that The General Excavator Company, Defendant in the above entitled cause, has been allowed, by the Honorable Judge Paul Jones, an appeal from the decree made on the 21st day of July, 1931, in this cause, and your petitioner also considers himself aggrieved by said decree, and, therefore, petitioner prays for allowance of a cross-appeal from said decree to the Circuit Court of Appeals for the Sixth Circuit, for reasons stated in the Assignment of Errors, filed herewith; that said defendant prays that this cross-appeal may be allowed; that citation may be granted to the above named defendant commanding it to appear before the said Circuit Court of Appeals; and that a transcript of the record, proceedings and papers upon which said order was based, duly authenticated, may be sent to the United States Court of Appeals for the Sixth Circuit.

RICHEY & WATTS,

Dated August 7, 1931. *Attorneys for Plaintiff.*

ASSIGNMENT OF ERRORS ON CROSS-APPEAL.

(Filed Aug. 7, 1931.)

[Case No. 964]

Now comes the Plaintiff, Keystone Driller Company, by Richey & Watts, its attorneys, and having prayed for a cross-appeal to the United States Circuit Court of Appeals for the Sixth Circuit from the decree made and entered in this cause on the 21st day of July, 1931, says that said decree is erroneous and unjust and against the rights of the said Plaintiff, and presents the following Assignment of Errors:

1. The Court erred in holding that the structure of the Defendant's machine does not infringe each and all of the claims 1 to 6 and 9 and 10 of Letters Patent of the United States to Robert Rex Downie, No. 1,543,250, dated June 23, 1925.

2. The Court erred in holding that United States Letters Patent to Robert Rex Downie, No. 1,709,466, dated April 16, 1929, lacked patentable invention as to claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 thereof.

3. The Court erred in holding that if there is patentable invention in claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 in United States Letters Patent to Robert Rex Downie, No. 1,709,466, dated April 16, 1929, the structure of the Defendant's machine did not infringe each and all of said claims of said patent.

4. The Court erred in failing to grant all the relief prayed for in the Bill of Complaint.

5. The Court erred in failing to grant all the relief prayed for in the Supplemental Bill of Complaint.

6. The Court erred in that it did not enter a decree finding that Letters Patent of the United States No. 1,709,466, dated April 16, 1929, is valid as to each and all of the claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 thereof.

7. The Court erred in that it did not enter a decree finding that Letters Patent of the United States to Robert Rex Downie, No. 1,709,466, dated April 16, 1929, as to each and all of the claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 had been infringed by the Defendant.

8. The Court erred in that it did not enter a decree for an injunction restraining the Defendant from infringement of said Letters Patent No. 1,709,466.

9. The Court erred in that it did not enter a decree awarding Plaintiff an accounting for profits and damages by reason of said infringement by Defendant of said Letters Patent No. 1,709,466.

10. The Court erred in that it did not enter a decree finding that Letters Patent No. 1,543,250 as to each and all claims 1 to 6 and 9 and 10 thereof had been infringed by the Defendant.

11. The Court erred in that it did not enter a decree for an injunction restraining the Defendant from infringement of Letters Patent No. 1,543,250.

12. The Court erred in that it did not enter a decree awarding Plaintiff an accounting for profits and damages by reason of the infringement by the Defendant of said Letters Patent No. 1,543,250.

13. The other errors manifest and apparent upon the record.

WHEREFORE, Plaintiff prays that the part of the decree complained of may be reversed and for such other and further relief as to the Court may seem just and proper.

RICHEY & WATTS,
Attorneys for Plaintiff.

August 7, 1931.

ORDER ALLOWING CROSS-APPEAL.

(Entered Aug. 10, 1931 by Paul Jones, Judge.)

[Case No. 964]

The General Excavator Company, Defendant in the above entitled cause, having been allowed an appeal by the Honorable Judge Paul Jones, dated July 29, 1931, from the decree made on the 21st day of July, 1931, in this cause; and,

On petition of Plaintiff, Keystone Driller Company, by its attorneys duly filed, it is ordered that a Cross-Appeal to the United States Circuit Court of Appeals for the Sixth Circuit from the said decree, heretofore filed and entered in this cause on the 21st day of July, 1931, be and the same is hereby allowed; that citation be issued directed to the above named defendant commanding it to appear before the said Circuit Court of Appeals; and that a certified transcript of the record in accordance with the

Rules of Practice for Courts of Equity of the United States be transmitted to the said United States Circuit Court of Appeals for the Sixth Circuit.

And it is further ordered that the cost bond on the cross appeal be fixed in the sum of $250.00.

PAUL JONES,
United States District Judge.

Dated: August 10th, 1931.

BOND ON CROSS-APPEAL.

(Filed August 13, 1931.)

[Case No. 964]

Know all men by these presents, that we, the Keystone Driller Company, as principal, and American Surety Co. of New York, as surety, are held and firmly bound unto The General Excavator Company in the full and just sum of Two Hundred and Fifty ($250) Dollars to be paid to the said The General Excavator Company, its successors or assigns, to which payment, well and truly to be made, we bind ourselves, our successors and assigns, jointly and severally by these presents.

Sealed with our seals, and dated this 11 day of August, 1931. Whereas, lately, at a regular term of the District Court of the United States for the Northern District of Ohio, Western Division, in a suit depending in said Court between Keystone Driller Company, plaintiff, and The General Excavator Company, defendant, a decree was rendered in part against the said The Keystone Driller Company and the said The Keystone Driller Company having obtained a cross-appeal and filed a copy thereof in the Clerk's Office of said Court to reverse that portion of the decree in the aforesaid suit, and a citation has been issued, directed to the said The General Excava-

tor Company citing and admonishing it to appear in the United States Circuit Court of Appeals for the Sixth Circuit at Cincinnati, Ohio, thirty days from and after the date of such citation.

Now, the condition of the above obligation is such, that if the said The Keystone Driller Company shall prosecute said cross-appeal to effect, and answer all costs for this said cross-appeal if it fails to make good its plea, then the above obligation to be void, else to remain in full force and effect.

KEYSTONE DRILLER COMPANY,
By RICHEY & WATTS,
Attys. for Plaintiff.

AMERICAN SURETY COMPANY OF NEW YORK,
EDW. F. ARCHER,
Resident Vice President.

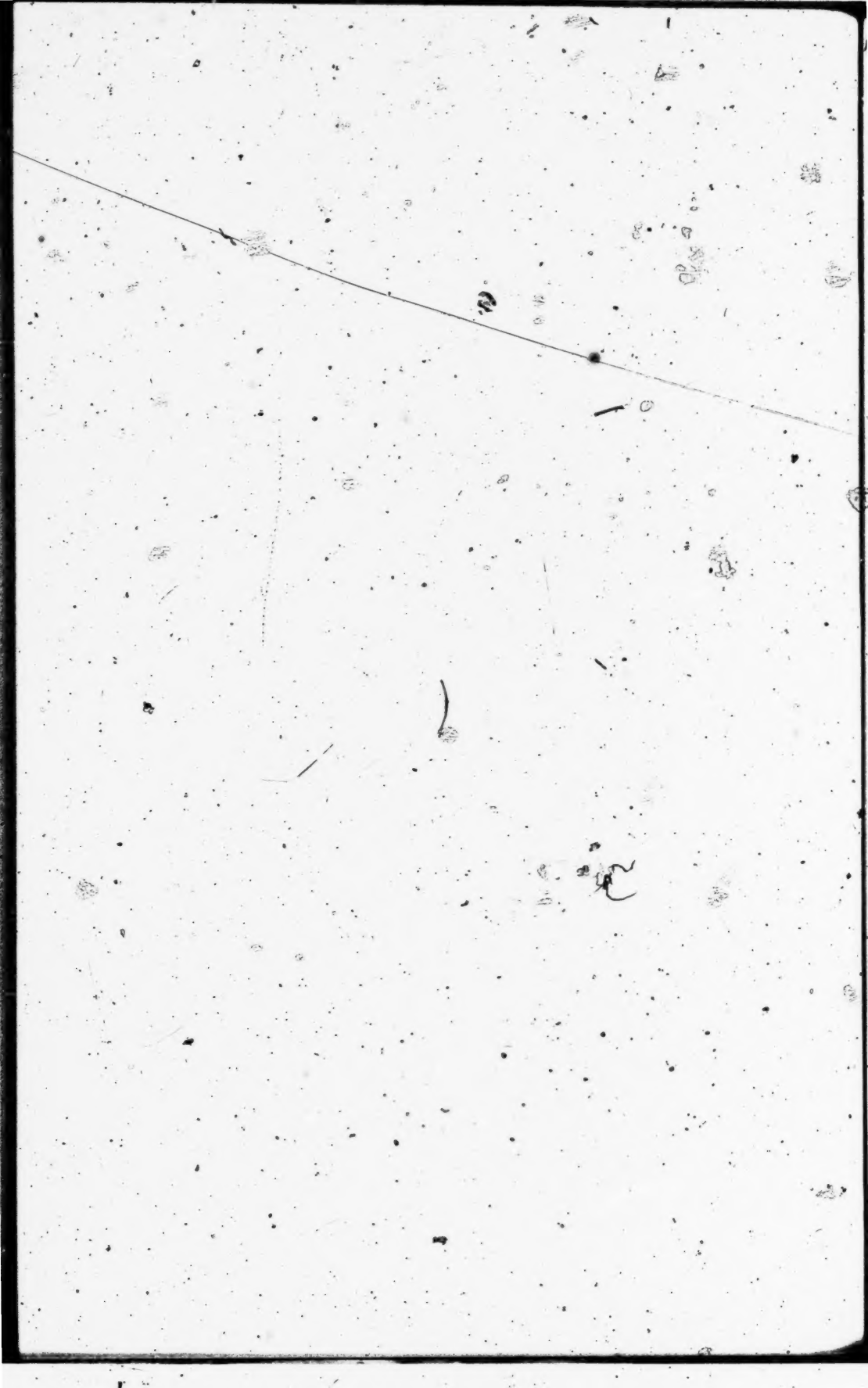
Attest:

R. M. WILL,
Resident Assistant Secretary.

(Seal)

The within bond is hereby approved this 12th day of August, 1931, and when filed, will operate as a supersedeas.

PAUL JONES,
United States District Judge.



CITATION ON CROSS-APPEAL.

(Filed Aug. 14, 1931.)

[Case No. 964]

UNITED STATES CIRCUIT COURT OF APPEALS
FOR THE SIXTH CIRCUIT.

To The General Excavator Company—Greeting:

You are hereby cited and admonished to be and appear at a session of the United States Circuit Court of Appeals for the Sixth Circuit, to be holden at the City of Cincinnati, in said Circuit, on the* 9th day of September next, pursuant to an appeal filed in the Clerk's office of the District Court of the United States for the Northern District of Ohio, wherein Keystone Driller Company is appellant and you are appellee to show cause, if any there be, why the decree rendered against the said appellant as in the said petition for appeal mentioned, should not be corrected, and why speedy justice should not be done to the parties in that behalf.

Witness the Honorable Charles Evans Hughes, Chief Justice of the United States, this 10th day of August in the year of our Lord one thousand nine hundred and thirty-one and of the Independence of the United States of America the one hundred and fifty-sixth.

PAUL JONES,
Judge of the District Court.

* Not exceeding 30 days from day of signing.

Service of the above citation is hereby acknowledged and appearance of appellee is hereby entered.

EDWARD L. REED.

August 10th, 1931.

ORDER EXTENDING TIME WITHIN WHICH TO LODGE NARRATIVE FORM OF TESTIMONY.

(Entered Aug. 22, 1931 by Paul Jones, Judge.)

[Case No. 964]

For good cause shown, it is ordered that the time for lodging the narrative form of testimony in the above entitled cause, be extended to and including September 15, 1931.

PAUL JONES,

United States District Judge.

August 22nd, 1931.

ORDER EXTENDING TIME FOR FILING TRANSCRIPT OF RECORD.

(Entered Aug. 22, 1931 by Paul Jones, Judge.)

[Case No. 964]

For good cause shown, it is ordered that the time for filing the transcript of record in the United States Circuit Court of Appeals for the Sixth Circuit, in the above-entitled case, be extended to and including September 28, 1931.

PAUL JONES,

United States District Judge.

Dated: August 22nd, 1931.

MOTION TO EXTEND TIME TO FILE TRANSCRIPT OF RECORD.

(Filed Sept. 24, 1931.)

[Case No. 964]

Now comes the Defendant, by its Attorneys, and prays that the time for filing the transcript of record in the United States Circuit Court of Appeals for the

Sixth Circuit, in the above-entitled cause, be extended to and including October 28, 1931.

In support of this motion, the Affidavit of Edward L. Reed is hereto annexed and made part hereof as Exhibit A.

EDWARD L. REED,
Attorney for Defendant.

Sept. 22, 1931.

Notice.

Messrs. Richey & Watts,
Attorneys for Plaintiff,
1090 Union Trust Building,
Cleveland, Ohio.

Gentlemen:

Please take notice that the above Motion will be presented to his Honor, Judge Jones, in the Court Room, Federal Building, Cleveland, Ohio, on the 24th day of September, 1931, at 9 o'clock, A. M., or as soon thereafter as Counsel may be heard.

EDWARD L. REED,
Attorney for Defendant.

A copy of the above-entitled Motion, Notice and Affidavit were today mailed to Messrs. Richey & Watts, Attorneys for the Plaintiff, 1090 Union Trust Building, Cleveland, Ohio.

EDWARD L. REED,
Attorney for Defendant.

September 22, 1931.

AFFIDAVIT OF EDWARD L. REED.

(Filed Sept. 24, 1931.)

[Case No. 964]

Edward L. Reed, being first duly sworn, deposes and says that he is Attorney for Defendant in the above-entitled cause; that on July 29, 1931, this Court granted an Appeal in the above-entitled cause; that the return day of the Citation issued herein has been extended by

Court Order until the 28th day of September, 1931; that the trial in the above-entitled cause lasted several weeks; that, consequently, the record in the cause is voluminous; that in addition to the evidence taken in Court, there were some fifty depositions offered in evidence; that diligent effort has been made to complete the preparation of this record for Appeal; that the Narrative Statement of Testimony under Equity Rule 75 has been filed as well as Defendant's Praecipe for Transcript; that under the Rules, approval of Defendant's Narrative Form of Testimony can not be had until September 25, 1931, and that if approved on that date it would be a physical impossibility to print the record before September 28, 1931; that the additional time requested is therefore necessary in order to print the record on appeal.

EDWARD L. REED.

Subscribed and sworn to before me, a notary public, this 22nd day of September, 1931.

MATTHEW SIEBLER,

(Seal) MATTHEW SIEBLER, *Notary Public*
In and for Montgomery County, Ohio.

My Commission Expires July 23, 1934.

ORDER EXTENDING TIME FOR FILING TRANSCRIPT OF RECORD.

(Entered Sept. 24, 1931 by Paul Jones, Judge.)

[Case No. 964]

For good cause shown, it is ordered that Defendant's time for filing the transcript of record in the United States Circuit Court of Appeals for the Sixth Circuit, in the above-entitled cause, be extended to and including October 28, 1931.

JONES,
United States District Judge.

Dated: September 24th, 1931.

MOTION FOR PROMPT ENTRY OF DECREE.

(Filed June 25, 1931.)

[Case No. 965]

Now comes the Plaintiff and moves the Court for a prompt entry of the attached Decree for the following reasons:

(1) The Decree conforms to the decision of this Court handed down on June 22, 1931.

(2) This litigation has been pending since 1926. This particular suit has been pending since the first of 1929. The litigation should be on its way. It can not go on forever.

(3) The Court has found that Mr. Downie's practice regarding certain matters was "highly reprehensible" which, of course, reflects upon Mr. Downie's character and he is entitled to a review of this Court's view on this subject promptly. This is a matter of personal privilege with him and nothing should interfere with or delay his right to an early review.

(4) There is no question regarding the validity and the infringement of the Clutter patent, in any event, and there is no reason why the entry of this decree should be withheld because of any questions which might be undeterminated regarding any of the other patents. The validity of the Clutter patent was again upheld by Judge Jones in the Day & Maddock case.

(5) The Petition for Leave to File Bill of Review in the Byers Case should not deter the entry of this decree for the reason that such must necessarily be denied since proceedings by Bill of Review is not the proper proceeding in the Byers Case. (*Central California Canners,* 282 Fed. 406 (C. C. A. 9th); *Simmons vs. Grier,* 258 U. S. 82; *National Brake vs. Christenson,* 278 Fed. 490 (C. C. A. 7th) and, second, because even if it is referred to Judge Jones, it must be denied by him since in the Day & Maddock Judge Jones has already three times refused the Plaintiff the right to take these proofs. There is no reason for his changing his mind on the fourth effort.

(6) Judge Jones has, with knowledge of the alleged new evidence in the instant cases and the charges of

suppression, fraud, and the furor about the same, held the first Downie patent valid again.

RICHEY & WATTS,
Attorneys for Plaintiff.

Cleveland, Ohio,
June 24, 1931.

It is so ordered.

.....,

June .., 1931. *United States District Judge.*

REQUEST FOR FINDINGS OF FACT AND CONCLUSIONS OF LAW.

(Filed June 11, 1931.)

[Case No. 965]

Defendant requests that the Court enter in this case special findings of fact and conclusions of law in the form attached hereto.

WILLIAMS, EVERSMAN & MORGAN,
Solicitors.

CORBETT & MAHONEY,
Of Counsel.

Copy of this request with the enclosed findings of fact and conclusions of law attached thereto has been mailed this day to Richey & Watts, 1090 Union Trust Building, Cleveland, Ohio, Counsel for the Plaintiff.

LLOYD I. WILLIAMS.

Dated July 11, 1931.

FINDINGS OF FACT AND CONCLUSIONS OF LAW.

(Filed June 11, 1931.)

[Case No. 965]

This cause coming on to be heard at this term of Court, and upon pleadings and proofs presented, and the Court having heard the arguments of counsel and being fully advised, now makes the following Findings of Fact and Conclusions of Law:

FINDINGS OF FACT.

1. That Le Roy P. Clutter Patent, No. 1,317,431, dated September 30, 1919, having been held valid by the Circuit Court of Appeals of this Circuit, in Byers Machine Company vs. Keystone Driller Company, 44 F. 2d, 283, as to Claim Four, (the claim in suit here) though new and impressive evidence has been offered in this case, it is deemed more fitting and proper by this Court that this new evidence and new arguments should be addressed to the Circuit Court of Appeals.

2. That Robert Rex Downie Patent, No. 1,511,114, dated October 7, 1924, is claimed to have been anticipated by the work of one Bernard R. Clutter done at Joplin, Missouri in the fall of 1919 and the early months of the year 1920. As to whether or not this work anticipates the Downie Patent, the Court does not think it should determine for the same reason which it has given herein, in considering the Clutter Patent, No. 1,317,431. New evidence is here presented as to this claimed anticipation. The new matter can be more properly and more fittingly presented to the Circuit Court of Appeals.

3. That Bernard R. Clutter, while working on the excavation of a cellar at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920, made and used an instroke ditcher with a drop bottom scoop, prior to any invention thereof by Robert Rex Downie, patentee of United States Letters Patent No. 1,511,114. The construction of this instroke ditcher with drop bottom scoop thereon is shown in Defendant's Exhibit, No. 26.

4. That the Keystone Driller Company had knowledge of this Bernard R. Clutter drop bottom instroke ditcher at the time it was made and used by Bernard R. Clutter at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920.

5. That Robert Rex Downie, patentee of Downie Patent No. 1,511,114, had knowledge of this Bernard R. Clutter drop bottom instroke ditcher before he filed application for Downie Patent No. 1,511,114, in suit.

6. That Downie Patent No. 1,511,114 was assigned to the Plaintiff Company and issued on October 7, 1924. That upon issuance of this patent, the Plaintiff Company contemplated bringing suits against various alleged infringers. That having this purpose in mind, the Plaintiff Company, through its General Manager, Robert Rex Downie, voluntarily called upon Bernard R. Clutter at his home in Lakewood, New Jersey, in the latter part of the year 1924 or the early part of the year 1925. That the witnesses, Bernard R. Clutter and Robert Rex Downie, admit that the occasion for this visit was to discuss the public use by Bernard R. Clutter of his drop bottom instroke ditcher at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920.

7. That Bernard R. Clutter testified, (and his testimony is supported by the documentary proofs) that Robert Rex Downie, during a visit to Lakewood, New Jersey, proposed to him that, as Keystone Driller Company were contemplating suits against infringers, they wanted Clutter to keep silent about his public use of the instroke ditcher with the drop bottom at Joplin, Missouri, and that, in consideration of his agreeing to do this, the Plaintiff Company would deliver to him a Keystone Excavator valued at $8,240, and credit him with a sum equal to one-half (1/2) the purchase price of said machine, one-quarter (1/4) credit to be given him upon delivery of the machine and one-quarter credit upon the successful termination of the litigation then in contemplation.

8. That Bernard R. Clutter accepted the proposition and delivery of the Keystone Excavator which was made by the Plaintiff Company. The suits contemplated by the Plaintiff Company were filed and the first of the credits promised Bernard R. Clutter for his silence was issued to him. During the pendency of these suits Bernard R. Clutter and the Plaintiff Company had a disagreement about back payments due upon this Excavator. The Plaintiff Company then agreed that, if it should repossess the machine, then in lieu of the second merchandise credit previously promised him, it would allow him a cash credit of $1,904. Clutter agreed to this and part of the cash credit, namely, $476, was actually paid

Clutter. Clutter pressed Keystone for the balance of this cash amount but Keystone, through its General Manager, Robert Rex Downie, kept putting him off until the litigation then pending against the Byers Company at Cleveland, Ohio, was decided in favor of the Keystone Driller Company.

9. That this suit was filed February 9, 1929, and Plaintiff came into this Court urging the binding effect against this Defendant of the decision rendered in the Byers case, obtained by fraud and suppression of evidence.

10. That this suit was filed February 9, 1929, and that Plaintiff came into this Court asserting that Robert Rex Downie was the first, true and original inventor of Downie Patent No. 1,511,114, in suit while it had in its files information and then had knowledge that the true inventor was Bernard R. Clutter and had, previous to and at the time of filing this suit, a corrupt agreement with Bernard R. Clutter to suppress the true facts as to the inventorship of said alleged invention.

11. That, at the time of filing this suit and thereafter, Plaintiff knew Downie Patent No. 1,511,114 to be invalid in view of the public use by Bernard R. Clutter at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920.

12. That alleged letters of repudiation written to Wagner and B. C. Clutter on April 12, 1929 (Plaintiff's Exhibits 45 and 46) were written and forwarded several months after this suit was filed and that said letters were never called to Defendant's attention or knowledge until a year and ten months after this suit was filed, and not until Defendant, without knowledge of these letters, had, by its own efforts, uncovered the attempted fraud and suppression attempted to be perpetrated by Plaintiff upon this Defendant.

13. That said alleged letters of repudiation (Plaintiff's Exhibits 45 and 46) were not constructive notice to this Defendant, and that so far as this Defendant was concerned, the attempted fraud and suppression of evidence were effective against this Defendant until uncovered by Defendant's own efforts.

CONCLUSIONS OF LAW.

1. That the Plaintiff, Keystone Driller Company, is by assignment the lawful owner of Letters Patent of the United States, as follows, to-wit:

Le Roy P. Clutter Patent, No. 1,317,431, dated September 30, 1919, for Ditching or Excavating Machine;

Robert Rex Downie Patent, No. 1,511,114, dated October 7, 1924, for Excavating Machine;

Robert Rex Downie Patent, No. 1,543,250, dated June 23, 1925, for Excavating Machine;

Robert Rex Downie Patent, No. 1,709,466, dated April 16, 1929, for Ditcher Scoop Assembly.

2. Clutter Patent No. 1,317,431, dated September 30, 1919, is held to be valid and infringed as to Claim 4.

3. The first Downie Patent No. 1,511,114, dated October 7, 1924, is held to be valid and infringed as to Claims 6 to 14, both inclusive.

4. That Robert Rex Downie Patent No. 1,543,250, dated June 23, 1925, is good and valid in law as construed by this Court as to Claims 1, 2, 3, 4, 5, 6, 9 and 10, but Claims 1, 2, 3, 4, 5, 6, 9 and 10 are not infringed by Defendant's structure, and the charge of infringement relative thereto is hereby dismissed.

5. That Robert Rex Downie Patent No. 1,709,466, dated April 16, 1929, is lacking in patentable invention as to Claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 thereof; that if there is patentable invention in the Claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 of said Letters Patent No. 1,709,466, Defendant's machine does not infringe said Claims.

6. That the intent and purpose pervading all of Downie's conduct in his transactions with Bernard R. Clutter as set forth above in the Findings of Fact was to keep Clutter silent, or in the alternative, to make him a hostile witness as to the claimed Defendant infringers. There is no doubt that, because of the signing of the contract and the offer of the consideration partly contingent upon the litigation, Clutter was kept in a quiescent state until after the decree had been entered in the case of Keystone Driller Company vs. Byers Machine Company, in the United States District Court for the Northern District of Ohio, Eastern Division, at Cleveland, Ohio, herein sometimes referred to as the Cleveland case or as the Byers case, and all of Downie's acts and efforts were designed to bring about that result.

7. That there was no fraud or suppression of evidence by Plaintiff in this case.

8. That the Plaintiff, through its General Manager, Downie, suppressed the evidence of the Bernard R. Clutter's Joplin public use of the instroke ditching machine with the drop bottom scoop, during the trial of the Cleveland case against the Byers Company, and at the time this suit was filed, such suppression was still effective.

9. That the conduct of the Plaintiff Company, through its General Manager, Downie, in making a corrupt agreement with Bernard R. Clutter for the suppression of the Bernard R. Clutter evidence of the Joplin public use of the instroke ditcher having a drop bottom, while still effective when this suit was filed, does not constitute unclean hands in this suit to bar the Plaintiff from equitable relief.

10. That the Plaintiff is not guilty of unclean hands in this suit by reason of its agreement with Bernard R. Clutter to suppress evidence.

11. That all of the evidence relative to the work of Bernard R. Clutter at Joplin, Missouri, in the latter part of the year 1919 and the early months of the year 1920 in making and using the instroke ditcher machine having a drop bottom bucket, is very material and relevant to this case, and that Robert Rex Downie, when General Manager of the Plaintiff Company, made agreements whose tendency was to suppress this evidence, and by his acts and conduct intended to and did suppress evidence relating to the Joplin work of Clutter.

12. That the Court declines to hold what effect this suppression of evidence had on the Byers case in the District Court and in the Circuit Court of Appeals.

13. That the Court declines to hold that because of the suppression of evidence in the Byers case, this Court should not consider the Byers case as having any binding effect in this case.

Entered this .... day of July, 1931.

....,

United States District Judge.

INTERLOCUTORY DECREE.

(Filed July 21, 1931.)

[Case No. 965]

This cause coming on to be heard at this term of Court, and upon pleadings and proofs presented and arguments by both parties, the court having filed its opinion which sufficiently finds the facts and the law, and thereupon, upon consideration thereof, it is Ordered, Adjudged and Decreed as follows:

(1) That Letters Patent of the United States to LeRoy P. Clutter, No. 1,317,431, dated September 30, 1919, for Ditching or Excavating Machine, is good and valid in law as to claim 4 thereof; that the inventor, LeRoy P. Clutter, named in the said patent, was the first, true and original inventor of the inventions, improvements and combinations described in said claim 4; and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to the Letters Patent therefor, as aforesaid;

That Letters Patent of the United States to Robert Rex Downie, No. 1,511,114, dated October 7, 1924, for Excavating Machine, is good and valid in law as to claims 6 to 14, both inclusive; that the inventor, Robert Rex Downie, named in the said patent, was the first, true and original inventor of the inventions, improvements and combinations described in said claims 6 to 14, both inclusive, thereof, and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to the said Letters Patent therefor, as aforesaid;

That Letters Patent of the United States to Robert Rex Downie, No. 1,543,250, dated June 23, 1925, for Excavating Machine, is good and valid in law as to claims 1, 2, 3, 4, 5, 6, 9 and 10; that the inventor, Robert Rex Downie, was the first, true and original inventor of said inventions, improvements and combinations described in said claims 1, 2, 3, 4, 5, 6, 9 and 10 of said patent, and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to said Letters Patent therefor, as aforesaid; that the structure of the Defendant's machine does not infringe claims 1 to 6 inclusive and 9 and 10 of said patent;

That Letters Patent of the United States to Robert Rex Downie, No. 1,709,466, dated April 16, 1929, for Ditcher Scoop Assembly, lacked patentable invention as to claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 thereof; that if there is patentable invention in said Letters Patent No. 1,709,466 as to claims 1, 2, 8, 10, 11, 12, 13, 15 and 19, the structure of Defendant's machine illustrated in Defendant's Exhibit No. 91 would not infringe said claims of said patent.

(2) That the Defendant, The Osgood Company, has infringed upon said Letters Patent to Clutter No. 1,317,431 and Downie No. 1,511,114 within the Northern District of Ohio, Western Division, and elsewhere in the United States, by the manufacture, sale and/or use of Ditching or Excavating Machines, employing or embodying the inventions set forth in certain of said patents and particularly upon claim 4 of patent No. 1,317,431, by the manufacture, sale and/or use of machines illustrated on pages 20, 21 and upper right hand view on page 23, Bulletin 2620, Exhibits 3 and 8 marked "attached to Plaintiff's Interrogatories" and Exhibit 9 marked "Entered Downie's Reply Affidavit," of Plaintiff's Exhibit P-29, Photographs K, F, and G of Plaintiff's Exhibit P-31 and in Plaintiff's Exhibit P-70, and upon claims 6 to 14, both inclusive, of patent No. 1,511,114, by the manufacture, sale and/or use of the machine illustrated on pages 20, 21, Bulletin 2620, Exhibit 3, marked "attached to Plaintiff's Interrogatories" of Plaintiff's Exhibit P-29, Photographs K, J, P and Q of Plaintiff's Exhibit P-31 and Plaintiff's Exhibit P-70.

(3) That the Plaintiff do recover from the Defendant, The Osgood Company, all profits, gains and advantages which the Defendant has or shall have derived, received or made by reason of said infringement and that the Plaintiff do recover from said Defendant, any and all damages which the Plaintiff has sustained or shall sustain by reason of said infringement by said Defendant.

(4) That this cause be, and the same is hereby referred to J. W. Wilson, Esq., a Master, to ascertain the amount of such gains and profits and the amount of damages sustained by the said Plaintiff by reason of such infringement; that the Defendant file its account with said Master in accordance with the Rules of Equity of the Supreme Court of the United States relevant thereto; that on such accounting the Plaintiff shall have the

right to cause an examination of the officers, servants, agents and employees of said Defendant, orally or otherwise, and also to cause the production of the Defendant's books, vouchers, accounts, bills of lading, shop orders and all documents relating to the manufacture of ditchers and parts thereof by Defendant, and that said Defendant, through its representatives, attend for such purpose before the Master from time to time as the said Master shall direct, and that all testimony and exhibits offered and used in this cause on behalf of either party may be referred to and used in such accounting.

(5) That an injunction be issued out of and under the seal of this Court, directed to the Defendant, The Osgood Company, its officers, servants, agents, employees, workmen and all their privies, and each and every one of them, enjoining and restraining them during the remainder of the respective terms of said Letters Patents Nos. 1,317,431 and 1,511,114, from directly or indirectly constructing or causing to be constructed and/or using and/or selling or causing to be used or sold or advertising for sale, Ditching or Excavating Machines employing or embodying the inventions set forth in certain of said patents and particularly upon claim 4 of patent No. 1,317,431, by the manufacture, sale and/or use of machines like apparatus illustrated in Plaintiff's Exhibit P-29, pages 20, 21 and upper right hand view on page 23, Bulletin 2620, Exhibits 3 and 8 marked "attached to Plaintiff's interrogatories" and Exhibit 9 marked "Entered Downie's Reply Affidavit," Photographs K, F and G of Plaintiff's Exhibit P-31 and in Plaintiff's Exhibit P-70, and any other apparatus, article, device or parts and/or combinations containing, employing or embodying the inventions and improvements described in Letters Patent No. 1,317,431 and particularly referred to in claim 4 thereof, and Excavating Machines employing and embodying the inventions set forth in Letters Patent No. 1,511,114 and particularly upon claims 6 to 14, both inclusive, thereof, by the manufacture, sale and/or use of machines like apparatus illustrated on pages 20, 21, Bulletin 2620, Exhibit 3, marked "attached to Plaintiff's Interrogatories" of Plaintiff's Exhibit P-29, Photographs K, J, P and Q of Plaintiff's Exhibit P-31 and Plaintiff's Exhibit P-70, and any other apparatus, article, device or parts and/or combinations containing, employing or embodying the inventions and improvements described in said Letters

Patent No. 1,511,114, and particularly referred to in claims 6 to 14, both inclusive, thereof, or apparatus, article, device, ditching or excavating machines to be used or capable only of use in a combination infringing any of said patents, and from infringing and contributing to infringement upon or violating any of said Letters Patent in any way whatsoever.

(6) The injunction and accounting herein ordered be suspended for ten (10) days from this date in order that Defendant may perfect its appeal. In view of the contemplated appeal the supersedeas bond is hereby fixed at $7500.00 with sureties and conditions to be approved by the judge who allows the appeal.

(7) That Plaintiff recover from the Defendant the Plaintiff's full cost in this suit to be taxed and to have execution therefor.

Entered this 21st day of July, 1931.

GEO. P. HAHN,
United States District Judge.

PETITION FOR APPEAL.

(Filed July 28, 1931.)

[Case No. 965]

The above named defendant, The Osgood Company, feeling aggrieved by the decree rendered and entered in the above entitled cause on the 21st day of July, A. D. 1931, does hereby appeal from said decree to the Circuit Court of Appeals for the Sixth Circuit for the reasons set forth in the assignment of errors filed herewith, and it prays that its appeal be allowed and that citation be issued as provided by law, and that a transcript of the record, proceedings and documents upon which said

decree was based, duly authenticated be sent to the United States Circuit Court of Appeals for the Sixth Circuit, under the rules of such court in such cases made and provided.

And your petitioner desires said appeal shall operate as a supersedeas, and therefore prays that an order be made fixing the amount of security which said defendant shall give and furnish upon such appeal, and that upon giving such security all further proceedings in this court be suspended and stayed until the determination of said appeal by the Circuit Court of Appeals for the Sixth Circuit.

CORBETT & MAHONEY,
Attorneys for Defendant.

Dated July 28, 1931.

ASSIGNMENT OF ERRORS.

(Filed July 28, 1931.)

[Case No. 965]

Now comes the defendant in the above-entitled cause and files the following assignment of errors upon which it will rely in the prosecution of the appeal herewith petitioned for in said cause, from the decree of this court entered on the 21st day of July, 1931:

1. That the court erred in holding United States Letters Patent to LeRoy P. Clutter 1,317,431, dated September 30, 1919, good and valid in law.

2. That the court erred in holding that the said LeRoy P. Clutter was the first, true and original inventor of the invention, improvement and combination described in claim 4 of said patent, 1,317,431.

3. That the court erred in holding that the defendant has infringed claim 4 of the said patent, 1,317,431.

4. That the court erred in holding the Clutter patent 1,317,431 to be valid, without finding the facts upon which this conclusion of law is based.

5. That the court erred in holding the Clutter patent 1,317,431 to be infringed, without finding the facts upon which this conclusion of law is based.

6. That the court erred in following the decision of other courts in the case of Keystone Driller Company vs. the Byers Machine Company et al., at Cleveland, Equity No. 2084, in view of the new evidence introduced on behalf of defendant in this case.

7. That the court erred in not holding that claim 4 of said Clutter patent 1,317,431 dated September 30, 1919, is limited by the specification, file wrapper, prior patents, and the prior state of the art, to substantially the construction disclosed in the drawings and specification of said patent.

8. That the court erred in not holding LeRoy P. Clutter patent 1,317,431 dated September 30, 1919, to be invalid, in view of new evidence introduced by defendant in this case, as to prior patents and the prior state of the art.

9. That the court erred in holding United States Letters Patent, to Robert Rex Downie 1,511,114, dated October 7, 1924, are good and valid in law.

10. That the court erred in holding that the said Robert Rex Downie, was the first, true and original inventor of said inventions, improvements and combinations described in claims 6 to 14 both inclusive of said Downie patent 1,511,114, dated October 7, 1924.

11. That the court erred in holding that the defendant has infringed claims 6 to 14, both inclusive, of the said Downie patent, No. 1,511,114, dated October 7, 1924.

12. That the court erred in holding United States Letters Patent to Robert Rex Downie 1,511,114, dated October 7, 1924, to be valid, without finding the facts upon which this conclusion of law is based.

13. That the court erred in holding United States Letters Patent to Robert Rex Downie 1,511,114, dated October 7, 1924, to be infringed, without finding the facts upon which this conclusion of law is based.

14. That the court's holding that Robert Rex Downie patent 1,511,114, dated October 7, 1924, are good

and valid in law, is inconsistent with the court's finding of fact on pages 32 and 33 of the court's opinion dated June 22, 1931, wherein the Bernard R. Clutter public use at Joplin, Missouri, is found in effect to have anticipated said Downie patent 1,511,114, dated October 7, 1924.

15. That the court erred in not holding that the work of Bernard R. Clutter at Joplin, Missouri, in the latter part of 1919 and the early part of 1920, constituted an anticipation of Downie patent 1,511,114, dated October 7, 1924.

16. That the court erred in not holding that Downie patent 1,511,114, dated October 7, 1924, is invalid in view of new evidence introduced in this case by defendant as to prior patents, and even as to the prior state of the art.

17. That the court erred in holding United States Letters Patent to Robert Rex Downie 1,543,250, dated June 23, 1925, are good and valid in law.

18. That the court erred in holding that Robert Rex Downie was the first, true and original inventor of said inventions, improvements and combinations described in claims 1, 2, 3, 4, 5, 6, 9 and 10 of said Downie patent 1,543,250.

19. That the court erred in not holding that plaintiff is barred from any relief herein by reason of its inequitable conduct.

20. That the court erred in not holding that plaintiff's concealment and suppression of evidence of the Bernard R. Clutter work at Joplin, Missouri, was still effective when this suit was filed, and that therefore plaintiff should be denied any relief.

21. That the court erred in not holding that plaintiff is guilty of unclean hands by reason of its agreement with Bernard R. Clutter to suppress evidence.

22. That the court erred in not holding that the plaintiff came into this court with unclean hands and in not dismissing the bill of complaint on that ground.

23. That the court erred in not holding the plaintiff to be guilty of fraud and suppression of evidence in this case, and in not dismissing the bill of complaint on that ground.

24. That the court erred in not disregarding the decision entered in the suit of the Keystone Driller Com-

pany vs. The Byers Machine Company and Byers Machine Company at Cleveland, Ohio, Equity No. 2084, in view of the suppression and concealment of evidence which the court held in effect to have been perpetrated by the plaintiff in that case.

25. That the court erred in not signing the special finding of facts and conclusions of law filed in this case on the 11th day of July, 1931, and requested by defendant.

26. That the court erred in not finding that the acts of Robert Rex Downie on behalf of the plaintiff company in suppressing and concealing evidence of the Bernard R. Clutter Joplin public use in the latter part of the year 1919 and the early part of the year 1920 constituted unclean hands in this case, and that therefore plaintiff should be denied any relief herein.

27. That the court erred in holding that there was no fraud or suppression of evidence by plaintiff, whatsoever in this case.

28. That the court erred in granting an injunction against the defendant in this case.

29. That the court erred in holding that the plaintiff recover any profits from defendant.

30. That the court erred in holding that the plaintiff recover from defendant any damages.

31. That the court erred in referring the cause to a master to ascertain the amount of damages sustained by plaintiff.

32. That the court erred in holding that plaintiff recover the full costs from defendant.

Wherefore, defendant prays that the said decree may be reversed and for such other and further relief as to this court may seem just and proper.

CORBETT & MAHONEY,

Attorneys for Defendant.

Dated this 28th day of July, A. D. 1931.

ORDER ALLOWING APPEAL WITH SUPERSEDEAS.

(Entered July 29, 1931 by Paul Jones, Judge.)

[Case No. 965]

The petition of The Osgood Company, defendant in the above entitled cause, for an appeal from the decree is hereby granted and the appeal is allowed; and upon petitioner filing a bond in the sum of Seven Thousand Five Hundred ($7500.00) Dollars with sufficient sureties, and conditioned as required by law, the same shall operate as a supersedeas of the decree made and entered in the above cause, and shall suspend and stay the injunction and accounting and all further proceedings in this court until the termination of said appeal by the Circuit Court of Appeals for the Sixth Circuit.

PAUL JONES,
United States District Judge.

Dated 29th day of July, 1931.

BOND ON APPEAL.

(Filed July 29, 1931.)

[Case No. 965]

Know all men by these presents, that we, The Osgood Company, as principal, and United States Fidelity and Guaranty Company as surety, are held and firmly bound unto Keystone Driller Company in the full and just sum of Seven Thousand Five Hundred ($7500.00) Dollars to be paid to the said Keystone Driller Company, its successors or assigns, to which payment, well and truly to be made, we bind ourselves, our successors and assigns, jointly and severally by these presents.

Sealed with our seals, and dated this 28th day of July, 1931.

Whereas, lately, at a regular term of the District Court of United States for the Northern District of Ohio, Western Division, in a suit depending in said Court between Keystone Driller Company, plaintiff and The Osgood Company, defendant, a decree was rendered against the said The Osgood Company, and the said The Osgood Company having obtained an appeal and filed a copy thereof in the Clerk's office of said Court to reverse the decree in the aforesaid suit, and a citation has been issued, directed to the said Keystone Driller Company, citing and admonishing it to appear in the United States Circuit Court of Appeals for the Sixth Circuit at Cincinnati, Ohio, thirty days from and after the date of such citation.

Now, the condition of the above obligation is such, that if the said The Osgood Company shall prosecute said appeal to effect, and answer all damages and costs, if it fails to make good its plea, then the above obligation to be void, else to remain in full force and effect.

THE OSGOOD COMPANY,
By M. C. MCNEIL,
(Corporate Seal) *V. P. & Secy.*

UNITED STATES FIDELITY AND GUARANTY COMPANY,
By LOUIS H. PAINE,
(Seal) *Attorney in Fact.*

The within bond is hereby approved this 29th day of July, 1931, and when filed, will operate as a supersedeas.

PAUL JONES,
United States District Judge.

CITATION ON APPEAL.

(Filed July 29, 1931.)

[Case No. 965]

UNITED STATES CIRCUIT COURT OF APPEALS
FOR THE SIXTH CIRCUIT.

To Keystone Driller Company, Greeting:

You are hereby cited and admonished to be and appear at a session of the United States Circuit Court of Appeals for the Sixth Circuit, to be holden at the City of Cincinnati, in said circuit on the* 28th day of August, 1931 next, pursuant to an order allowing an appeal filed in the Clerk's office of the District Court of the United States for the Northern District of Ohio, wherein The Osgood Company is appellant and you are appellee to show cause, if any there be, why the decree rendered against the said appellant as in the said appeal mentioned, should not be corrected, and why speedy justice should not be done to the parties in that behalf.

WITNESS, the Honorable Charles Evans Hughes, Chief Justice of the United States, this 29th day of July in the year of our Lord one thousand nine hundred and thirty-one and of the Independence of the United States of America the one hundred and fifty-sixth.

PAUL JONES,
Judge of the District Court.

*Not exceeding 30 days from day of signing.

Service of the above citation is hereby acknowledged and appearance of appellee is hereby entered.

July 29, 1931. RICHEY & WATTS.

PETITION FOR CROSS-APPEAL.

(Filed Aug. 7, 1931.)

[Case No. 965]

To the Honorable, the Judges of the District Court of the United States for the Northern District of Ohio, Western Division:

Your petitioner, the Keystone Driller Company, Plaintiff in the above entitled cause, respectfully shows that The Osgood Company, Defendant in the above entitled cause, has been allowed, by the Honorable Judge Paul Jones, an appeal from the decree made on the 21st day of July, 1931, in this cause, and your petitioner also considers himself aggrieved by said decree, and therefore petitioner prays for allowance of a cross-appeal from said decree to the Circuit Court of Appeals for the Sixth Circuit, for reasons stated in the Assignment of Errors, filed herewith; that said defendant prays that this cross-appeal may be allowed; that citation may be granted to the above-named defendant commanding it to appear before the said Circuit Court of Appeals; and that a transcript of the record, proceedings and papers upon which said order was based, duly authenticated, may be sent to the United States Court of Appeals for the Sixth Circuit.

RICHEY & WATTS,
Attorneys for Plaintiff.

Dated August 7, 1931.

ASSIGNMENT OF ERRORS ON CROSS-APPEAL.

(Filed Aug. 7, 1931.)

[Case No. 965]

Now comes the Plaintiff, Keystone Driller Company, by Richey & Watts, its attorneys, and having prayed for a cross-appeal to the United States Circuit Court of Ap-

peals for the Sixth Circuit from the decree made and entered in this case on the 21st day of July, 1931, says that said decree is erroneous and unjust and against the rights of the said Plaintiff, and presents the following Assignment of Errors:

1. The Court erred in holding that the structure of the Defendant's machine does not infringe each and all of the claims 1 to 6 and 9 and 10 of Letters Patent of the United States to Robert Rex Downie, No. 1,543,250, dated June 23, 1925.

2. The Court erred in holding that United States Letters Patent to Robert Rex Downie, No. 1,709,466, dated April 16, 1929, lacked patentable invention as to claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 thereof.

3. The Court erred in holding that if there is patentable invention in claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 in United States Letters Patent to Robert Rex Downie, No. 1,709,466, dated April 16, 1929, the structure of the Defendant's machine did not infringe each and all of said claims of said patent.

4. The Court erred in failing to grant all the relief prayed for in the Bill of Complaint.

5. The Court erred in failing to grant all the relief prayed for in the Supplemental Bill of Complaint.

6. The Court erred in that it did not enter a decree finding that Letters Patent of the United States No. 1,709,466, dated April 16, 1929, is valid as to each and all of the claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 thereof.

7. The Court erred in that it did not enter a decree finding that Letters Patent of the United States to Robert Rex Downie, No. 1,709,466, dated April 16, 1929, as to each and all of the claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 had been infringed by the Defendant.

8. The Court erred in that it did not enter a decree for an injunction restraining the Defendant from infringement of said Letters Patent No. 1,709,466.

9. The Court erred in that it did not enter a decree awarding Plaintiff an accounting for profits and damages by reason of said infringement by Defendant of said Letters Patent No. 1,709,466.

10. The Court erred in that it did not enter a decree finding that Letters Patent No. 1,543,250 as to each and all claims 1 to 6 and 9 and 10 thereof had been infringed by the Defendant.

11. The Court erred in that it did not enter a decree for an injunction restraining the Defendant from infringement of Letters Patent No. 1,543,250.

12. The Court erred in that it did not enter a decree awarding Plaintiff an accounting for profits and damages by reason of the infringement by the Defendant of said Letters Patent No. 1,543,250.

13. The other errors manifest and apparent upon the record.

WHEREFORE, Plaintiff prays that the part of the decree complained of may be reversed and for such other and further relief as to the Court may seem just and proper.

RICHEY & WATTS,
Attorneys for Plaintiff.

August 7, 1931.

ORDER ALLOWING CROSS-APPEAL.

(Entered Aug. 10, 1931, by Paul Jones, Judge.)

[Case No. 965]

The Osgood Company, Defendant in the above entitled cause, having been allowed an appeal by the Honorable Judge Paul Jones, dated July 29, 1931, from the decree made on the 21st day of July, 1931, in this cause; and,

On petition of Plaintiff, Keystone Driller Company, by its attorneys duly filed, it is ordered that a Cross-Appeal to the United States Circuit Court of Appeals for the Sixth Circuit from the said decree, heretofore

filed and entered in this cause on the 21st day of July, 1931, be and the same is hereby allowed; that citation be issued directed to the above named defendant commanding it to appear before the said Circuit Court of Appeals; and that a certified transcript of the record in accordance with the Rules of Practice for Courts of Equity of the United States be transmitted to the said United States Circuit Court of Appeals for the Sixth Circuit.

It is further ordered that the cost bond on Cross Appeal be fixed in the sum of $250.00.

PAUL JONES,
United States District Judge.

Dated: August 10th, 1931.

BOND ON CROSS-APPEAL.

(Filed August 13, 1931.)

[Case No. 965]

KNOW ALL MEN BY THESE PRESENTS, that we, the Keystone Driller Company, as principal, and American Surety Co. of New York, as surety, are held and firmly bound unto The Osgood Company in the full and just sum of Two Hundred and Fifty ($250.00) Dollars to be paid to the said The Osgood Company, its successors or assigns, to which payment, well and truly to be made, we bind ourselves, our successors and assigns, jointly and severally by these presents.

Sealed with our seals, and dated this 11 day of August, 1931.

WHEREAS, lately, at a regular term of the District Court of the United States for the Northern District of Ohio, Western Division, in a suit depending in said Court between Keystone Driller Company, plaintiff, and The Osgood Company, defendant, a decree was rendered in

part against the said The Keystone Driller Company and the said The Keystone Driller Company having obtained a cross-appeal and filed a copy thereof in the Clerk's Office of said Court to reverse that portion of the decree in the aforesaid suit, and a citation has been issued, directed to the said The Osgood Company citing and admonishing it to appear in the United States Circuit Court of Appeals for the Sixth Circuit at Cincinnati, Ohio, thirty days from and after the date of such citation.

Now, the condition of the above obligation is such, that if the said The Keystone Driller Company shall prosecute said cross-appeal to effect, and answer all costs for this said cross-appeal if it fails to make good its plea, then the above obligation to be void, else to remain in full force and effect.

KEYSTONE DRILLER COMPANY,
By RICHEY & WATTS,
Attys. for Plaintiff.

AMERICAN SURETY COMPANY OF NEW YORK,
EDW. F. ARCHER,
Resident Vice President.

Attest

(Seal) R. M. WILL,
Resident Assistant Secretary.

The within bond is hereby approved this 12th day of August, 1931, and when filed, will operate as a supersedeas.

PAUL JONES,
United States District Judge.

CITATION ON CROSS-APPEAL.

(Filed Aug. 14, 1931.)

[Case No. 965]

UNITED STATES CIRCUIT COURT OF APPEALS
FOR THE SIXTH CIRCUIT.

To The Osgood Company—Greeting.

You are hereby cited and admonished to be and appear at a session of the United States Circuit Court of Appeals for the Sixth Circuit, to be holden at the City of Cincinnati, in said Circuit, on the* 9th day of September next, pursuant to an appeal filed in the Clerk's office of the District Court of the United States for the Northern District of Ohio, wherein Keystone Driller Company is appellant and you are appellee to show cause, if any there be, why the decree rendered against the said appellant as in the said petition for appeal mentioned, should not be corrected, and why speedy justice should not be done to the parties in that behalf.

WITNESS the Honorable CHARLES EVANS HUGHES, Chief Justice of the United States, this 10th day of August in the year of our Lord one thousand nine hundred and thirty-one and of the Independence of the United States of America the one hundred and fifty-sixth.

PAUL JONES,
Judge of the District Court.

*Not exceeding 30 days from day of signing.

Service of the above citation is hereby acknowledged and appearance of appellee is hereby entered.

CORBETT & MAHONEY.

August 10th, 1931.

ORDER EXTENDING TIME WITHIN WHICH TO LODGE NARRATIVE FORM OF TESTIMONY.

(Entered Aug. 22, 1931, by Paul Jones, Judge.)

[Case No. 965]

For good cause shown, it is ordered that the time for lodging the narrative form of testimony in the above entitled cause, be extended to and including September 15, 1931.

JONES,

United States District Judge.

August 22nd, 1931.

ORDER EXTENDING TIME FOR FILING TRANSCRIPT OF RECORD.

(Entered Aug. 22, 1931 by Paul Jones, Judge.)

[Case No. 965]

For good cause shown, it is Ordered that the time for filing the transcript of record in the United States Circuit Court of Appeals for the Sixth Circuit, in the above-entitled case, be extended to and including September 28, 1931.

JONES,

United States District Judge.

Dated: August 22nd, 1931.

MOTION TO EXTEND TIME TO FILE TRANSCRIPT OF RECORD.

(Filed Sept. 24, 1931.)

[Case No. 965]

Now comes the Defendant, by its Attorneys, and prays that the time for filing the transcript of record in the United States Circuit Court of Appeals for the Sixth Circuit, in the above-entitled cause, be extended to and including October 28, 1931.

In support of this Motion, the Affidavit of John J. Mahoney is hereto annexed and made part hereof as Exhibit A.

CORBETT & MAHONEY,
Attorneys for Defendant.

Sept. 21, 1931.

Notice.

Messrs. Richey & Watts,
Attorneys for Plaintiff,
1090 Union Trust Building,
Cleveland, Ohio.

Gentlemen:

Please take notice that the above Motion will be presented to his Honor, Judge Jones, in the Court Room, Federal Building, Cleveland, Ohio, on the 24th day of September, 1931, at 9 o'clock, A. M., or as soon thereafter as Counsel may be heard.

CORBETT & MAHONEY,
Attorneys for Defendant.

A copy of the above-entitled Motion, Notice and Affidavit were today mailed to Messrs. Richey & Watts, Attorneys for the Plaintiff, 1090 Union Trust Building, Cleveland, Ohio.

CORBETT & MAHONEY,
Attorneys for Defendant.

September 21, 1931.

"EXHIBIT A."

AFFIDAVIT OF JOHN J. MAHONEY.

(Filed Sept. 24, 1931.)

[Case No. 965]

John J. Mahoney, being first duly sworn, deposes and says that he is one of the Attorneys for Defendant in the above-entitled cause; that on July 29, 1931, this Court granted an Appeal in the above-entitled cause; that the return day of this Citation issued herein has been extended by Court Order until the 28th day of September, 1931; that the trial in the above-entitled cause lasted several weeks; that, consequently, the record in the cause is voluminous; that in addition to the evidence taken in Court, there were some fifty depositions offered in evidence; that Counsel for Defendant has been proceeding very diligently in the preparation of this record for appeal; that the Narrative Statement of Testimony under Equity Rule 75 has been filed as well as Defendant's Praecipe for Transcript; that under the Rules, approval of Defendant's Narrative Form of Testimony can not be had until September 25, 1931, and that if approved on that date it would be a physical impossibility to print the record before September 28, 1931; that the additional time requested is therefore necessary in order to print the record on appeal.

JOHN J. MAHONEY.

Subscribed and sworn to before me, a Notary Public, this 21st day of September, 1931.

BERNICE L. HAHN,

(Notarial Seal) *Notary Public in and for Franklin County.*

BERNICE L. HAHN.

My commission expires Jan. 3, 1932.

ORDER EXTENDING TIME FOR FILING TRANSCRIPT OF RECORD.

(Entered Sept. 24, 1931 by Paul Jones, Judge.)

[Case No. 965]

For good cause shown, it is Ordered that Defendant's time for filing the transcript of record in the United States Circuit Court of Appeals for the Sixth Circuit, in the above-entitled cause, be extended to and including October 28, 1931.

PAUL JONES,
United States District Judge.

Dated:
September 24th, 1931.

CONSOLIDATED PRAECIPE FOR TRANSCRIPT.

(Filed Sept. 16, 1931.)

[Cases Nos. 964 and 965]

To the Clerk of the United States District Court for the Northern District of Ohio, Western Division:

Sir:

You are hereby requested to make a transcript of record to be filed in United States Circuit Court of Appeals for the Sixth Circuit, in the above entitled consolidated cause, pursuant to an appeal from an interlocutory decree allowed to the plaintiff on the 21st day of July, 1931, in each of the above entitled cases, and to include in such transcript of record the following papers:

PAPERS IN EQUITY CAUSE NO. 964.

Caption.

1. Order of Consolidation for Appeal, entered September 15, 1931.

2. Bill of Complaint, filed February 9, 1929.

3. Plaintiff's Interrogatories, filed February 9, 1929.

4. Affidavit of Robert Rex Downie, filed February 9, 1929.

5. Motion for Preliminary Injunction, filed February 9, 1929.

6. Order to Show Cause, entered February 9, 1929.

7. Order Modifying Order to Show Cause, entered February 18, 1929.

8. Order Extending Time for Serving Copies of Order, entered February 21, 1929.

9. Defendant's Answer to Plaintiff's Interrogatories, filed February 25, 1929.

10. Stipulation Extending Time to Answer, filed February 28, 1929.

11. Order Modifying Dates in Order to Show Cause, entered March 9, 1929.

12. Stipulation Extending Time for Filing Papers, entered March 28, 1929.

13. Order Modifying Dates in Order to Show Cause, entered March 28, 1929.

14. Defendant's Answer, filed March 29, 1929.

15. Stipulation re Use of Uncertified Copies of Patent, etc. at Trial, entered April 15, 1929.

16. Memorandum Opinion of Court upon motion for Preliminary Injunction, filed April 25, 1929.

17. Order Denying Motion for Preliminary Injunction, entered June 12, 1929.

18. Bond of Defendant for $15,000, filed June 12, 1929.

19. Stipulation in re Time for Taking Depositions, entered June 13, 1929.

20. Supplemental Bill of Complaint, filed August 9, 1929.

21. Order Granting Leave to File Supplemental Bill of Complaint, entered August 23, 1929.

22. Order Allowing Defendant Extension of Time to Answer Supplemental Bill of Complaint, entered September 9, 1929.

23. Order Permitting The General Excavator Company and The Osgood Company to Take Depositions Jointly, filed September 9, 1929.

24. Stipulation re Depositions, filed September 30, 1929.

25. Answer to Supplemental Bill of Complaint, filed October 10, 1929.

25A. Plaintiff's Interrogatories, filed October 21, 1929.

25B. Defendant's Objections to Plaintiff's Interrogatories, filed October 31, 1929.*

26. Stipulation re Interrogatories and Depositions, filed October 31, 1929.

27. Stipulation and Order Extending Time of Defendant to Take Depositions, filed October 31, 1929.

28. Stipulation re Depositions, filed December 4, 1929.

29. Stipulation re Depositions, filed January 3, 1930.

30. Stipulation re Depositions, filed February 4, 1930.

31. Motion and Order Extending Time for Taking Depositions, filed February 21, 1930.

32. Stipulation re Depositions, filed February 27, 1930.

33. Motion and Order Extending Time for Taking Depositions, filed March 18, 1930.

34. Stipulation in re Depositions, filed April 1, 1930.

25. Stipulation in re Depositions, filed April 29, 1930.

26. Order Allowing Substitution of Bond, entered May 17, 1930.

27. Copy of Bond in Lieu of Preliminary Injunction, filed May 17, 1930.

28. Stipulation in re Depositions, filed June 3, 1930.

29. Stipulation and Order in re Depositions, filed June 26, 1930.

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*The items in black face type represent the papers called for by Plaintiff's Additional Praecipe and have been inserted herein to preserve the chronology of the Docket Entries.

30. Stipulation in re Depositions, filed July 29, 1930.

31. Stipulation in re Depositions, filed September 5, 1930.

32. Stipulation in re Depositions, filed September 23, 1930.

33. Order Extending Defendant's Time for Taking Depositions, entered September 29, 1930.

34. Order Extending Defendant's Time for Taking Depositions, entered October 29, 1930.

35. Order Extending Defendant's Time for Taking Depositions, entered November 26, 1930.

36. Motion to Compel Production and Inspection of Documents, and Affidavit of Edward L. Reed, filed December 31, 1930.

36A. Offer by Plaintiff to Produce Letters etc., filed December 31, 1930.

37. Affidavit of F. O. Richey and A. H. Edgerton, filed December 31, 1930.

38. Affidavit of Robert Rex Downie, filed December 31, 1930.

39. Order Dismissing Defendant's Motion to Compel Production and Inspection of Documents, entered February 2, 1931.

40. Stipulation in re Title to Certain Patents, filed February 11, 1931.

41. Stipulation and Order Allowing Use of Uncertified Printed Copies of Patents in Suit, entered February 16, 1931.

42. Order Allowing Amendment to Defendant's Answer to Supplemental Bill of Complaint, entered February 16, 1931.

43. Amendment to Answer to Supplemental Bill of Complaint, filed February 16, 1931.

44. Order Allowing Amendment to Defendant's Answer to Original Bill of Complaint, entered February 16, 1931.

45. Amendment to Answer to Original Bill of Complaint, filed February 16, 1931.

46. Order Consolidating Cause Number 964 with Cause Number 965 for the Purpose of Trial, entered March 3, 1931:

47. Stipulation re Use of Depositions of John B. Webber, Walter S. Culver, and Frank H. King, filed March 3, 1931.

48. Stipulation re Deposition of William Mitchell, filed March 4, 1931.

49. Order Permitting Taking of Depositions at South Milwaukee, Wisconsin, entered April 20, 1931.

PAPERS IN EQUITY CAUSE NO. 965.

50. Order of Consolidation for Appeal, entered September 15, 1931.

51. Bill of Complaint, filed February 9, 1929.

51A. Plaintiff's Interrogatories, filed February 9, 1929.

51B. Affidavit of Robert Rex Downie, filed February 9, 1929.

52. Motion for Preliminary Injunction, filed February 9, 1929.

53. Order to Show Cause, entered February 9, 1929.

54. Order Modifying Dates in Order to Show Cause, entered February 16, 1929.

55. Order Modifying Dates in Order to Show Cause, entered February 20, 1929.

55A. Objections to Plaintiff's Interrogatories, filed February 26, 1929.

55B. Plaintiff's Answer to Defendant's Objection to Plaintiff's Interrogatories, filed March 5, 1929.

56. Stipulation Extending Time to Answer until April 3, 1929, filed March 9, 1929.

57. Order Modifying Dates in Order to Show Cause, entered March 9, 1929.

58. Order Extending Plaintiff's Time for Serving Rebuttal Papers, entered March 28, 1929.

59. Answer, filed April 3, 1929.

60. Stipulation re Use of Uncertified Copies of Patents, etc. at Trial, filed April 9, 1929.

61. Stipulation re Interrogatories and Depositions, filed April 22, 1929.

62. Memorandum Opinion of Court on Motion for Preliminary Injunction, filed April 25, 1929.

63. Stipulation re Interrogatories and Depositions, filed May 27, 1929.

64. Order denying motion for Preliminary Injunction, entered June 6, 1929.

65. Copy of Bond, filed June 6, 1929.

65A. Supplemental Bill of Complaint, filed August 21, 1929.

66. Order Permitting Filing of Supplemental Bill of Complaint, entered August 23, 1929.

67. Motion for an Extension of Defendant's Time to Answer Supplemental Bill of Complaint, and Order Granting Extension, entered September 9, 1929.

68. Order Permitting The General Excavator Company and The Osgood Company to Take Depositions Jointly, entered September 9, 1929.

69. Stipulation re Depositions, filed September 28, 1929.

70. Answer to Supplemental Bill of Complaint, filed October 1, 1929.

70A. Plaintiff's Interrogatories, filed October 21, 1929.

71. Stipulation re Interrogatories and Depositions, filed October 22, 1929.

72. Stipulation re Depositions, filed October 26, 1929.

72A. Objections to Plaintiff's Interrogatories, filed October 31, 1929.

73. Stipulation re Depositions, filed November 30, 1929.

74. Stipulation re Depositions, filed December 24, 1929.

75. Stipulation re Depositions, filed February 4, 1930.

76. Motion for Extension of Time for Taking Depositions, and Order Granting Motion, filed February 21, 1930.

77. Stipulation re Depositions, filed February 27, 1930.

78. Motion to Extend Time to Take Depositions, and Order Granting Extension, filed March 17, 1930.

79. Stipulation re Depositions, filed April 4, 1930.

80. Stipulation re Depositions, filed April 29, 1930.

81. Stipulation re Depositions, filed April 29, 1930.

82. Stipulation re Depositions, filed May 9, 1930.

83. Stipulation re Depositions, filed May 29, 1930.

84. Order Permitting Substitution of Bond, filed May 29, 1930.

85. Copy of Bond, filed May 29, 1930.

86. Stipulation re Depositions, filed June 11, 1930.

87. Stipulation re Depositions, filed June 28, 1930.

88. Stipulation re Depositions, filed July 29, 1930.

89. Stipulation re Depositions, filed August 27, 1930.

90. Stipulation re Depositions, filed September 20, 1930.

91. Order Extending Time for Taking Depositions, filed September 29, 1930.

92. Order Extending Time for Taking Depositions, filed October 29, 1930.

93. Order Extending Time for Taking Depositions, filed November 26, 1930.

94. Motion to Compel Production and Inspection of Documents, filed December 19, 1930.

95. Affidavit of Edwin P. Corbett in Support of Motion, filed December 1930.

96. Affidavit of John J. Mahoney in Support of Motion, filed December 19, 1930.

97. Affidavit of A. H. Edgerton, filed December 20, 1930.

98. Affidavit of F. O. Richey and A. H. Edgerton, filed December 31, 1930.

99. Affidavit of Robert Rex Downie, filed December 31, 1930.

99A. Offer by Plaintiff to Produce Letters, Documents, etc., filed December 31, 1930.

100. Second Affidavit of John J. Mahoney, filed January 2, 1931.

101. Notice Under Revised Statutes of United States, Section No. 4920, filed February 3, 1931.

102. Order Dismissing Defendant's Motion to Compel Production and Inspection of Documents, entered February 2, 1931.

103. Order Permitting Amendment to Defendant's Answer to Be Filed, entered March 2, 1931.

104. Amendment to Defendant's Answer to Original Bill of Complaint, filed March 2, 1931.

105. Order Permitting Amendment to Be Made to Defendant's Answer to Supplemental Bill of Complaint, filed March 2, 1931.

106. Amendment to Defendant's Answer to Supplemental Bill of Complaint, filed March 2, 1931.

107. Order Consolidating Cause Number 965 with Cause Number 964 for the Purpose of Trial, entered March 3, 1931.

108. Stipulation re Depositions of John B. Webber, Walter S. Culver, and Frank H. King, filed March 3, 1931.

109. Stipulation re Deposition of William Mitchell, filed March 4, 1931.

110. Order Permitting Taking of Depositions at South Milwaukee, Wisconsin, entered April 17, 1931.

PAPERS AND RECORDS COMMON TO CAUSES 964 AND 965.

111. Narrative Statement of Testimony, and Notice of Lodging same in Clerk's Office with Proof of Service, filed September 26, 1931.

112. Order Approving Narrative Statement of Testimony, filed September 26, 1931.

113. Memorandum Opinion of Court, filed June 22, 1931.

114. Plaintiff's Exhibits P-1 to P-11 inclusive, P-22 to P-23, P-38, P-45, and P-46, P-73.

115. Defendant's Exhibits 3, 7, 8, 17, 20, 24, 25, 27 to 29 inclusive, 32 to 34 inclusive, 37 to 41 inclusive, 50 to 53 inclusive, 59, 61, 62, 80, 95, 97 to 100 inclusive, 102 to 115 inclusive, 129.

PAPERS IN EQUITY CAUSE NO. 964.

116. Motion and Order Granting Plaintiff Leave to File Chart of Downie Patent 1,709,466 as Plaintiff's Exhibit P-77, filed June 26, 1931.

117. Request for Findings of Fact and Conclusions of Law, filed July 15, 1931.

118. Interlocutory Decree, filed July 21, 1931.

119. Petition for Appeal, filed July 28, 1931.

120. Assignment of Errors, filed July 28, 1931.

121. Order Allowing Appeal, filed July 29, 1931.

122. Copy of Supersedeas Bond on Appeal, filed July 29, 1931.

123. Citation on Appeal, filed July 29, 1931.

124. Petition for Cross Appeal, filed August 7, 1931.

125. Assignment of Errors on Cross Appeal, filed August 7, 1931.

126. Order Allowing Cross Appeal, entered August 10, 1931.

127. Citation on Cross Appeal, filed August 14, 1931.

128. Bond on Cross Appeal, filed and approved August 13, 1931.

129. Order Extending Time to Lodge Narrative Statement, entered August 22, 1931.

130. Order Extending Time to File Transcript of Record, entered August 22, 1931.

PAPERS IN EQUITY CAUSE NO. 965.

131. Request for Findings of Fact and Conclusions of Law, filed July 11, 1931.

132. Interlocutory Decree, filed July 21, 1931.

133. Petition for Appeal, filed July 28, 1931.

134. Assignment of Errors, filed July 28, 1931.

135. Order Allowing Appeal, filed July 29, 1931.

136. Copy of Supersedeas Bond on Appeal, filed July 29, 1931.

137. Citation on Appeal, filed July 29, 1931

138. Petition for Cross Appeal, filed August 7, 1931.

139. Assignment of Errors on Cross Appeal, filed August 7, 1931.

140. Order Allowing Cross Appeal, filed August 10, 1931.

141. Citation on Cross Appeal, filed August 14, 1931.

142. Bond on Cross Appeal, filed August 13, 1931.

143. Order Extending Time to File Transcript of Record, filed August 22, 1931.

144. Order Extending Time for Lodging Narrative Statement, filed August 22, 1931.

PAPERS COMMON TO EQUITY CAUSES 964 AND 965.

145. Stipulation re Withdrawal of Exhibits, filed September 24, 1931.

146. Order Withdrawing Certain Exhibits, filed September 24, 1931.

147. Stipulation re Certification of Record, filed September 26, 1931.

148. This Praecipe, and Proof of Service, filed September 16, 1931.

149. Certificate of Clerk.

EDWARD L. REED,
Attorney for The General Excavator Company.

CORBETT & MAHONEY,
Attorneys for The Osgood Company.

Proof of Service.

STATE OF OHIO,
COUNTY OF LUCAS, SS.

John J. Mahoney, being first duly sworn, deposes and says that he is one of the attorneys for the defendants in the above entitled causes; that on this date he forwarded a copy of the Consolidated Praecipe for Transcript to Messrs. Richey and Watts, 1490 Union Trust Building, Cleveland, Ohio, by registered mail, receipt thereof being attached thereto.

JOHN J. MAHONEY.

Subscribed to and sworn to before me this 15th day of September, 1931.

ADELAIDE MACHEN,
ADELAIDE MACHEN
Notary Public.

(Notarial Seal)

STIPULATION RE WITHDRAWAL OF EXHIBITS.

(Filed Sept. 24, 1931.)

[Case No. 964]

In the above entitled cause, it is stipulated that Plaintiff's Exhibits P-12, P-12-1, P-12-2, P-13, P-14, P-15, P-16, P-17, P-18, P-19, P-20, P-21, P-24 to P-37 inclusive, P-39 to P-44, inclusive, P-47 to P-72, inclusive, P-74 to P-77, inclusive, and Defendant's Exhibits 1, 2, 4, 5, 6, 9 to 16, inclusive, 18, 19, 21 to 23, inclusive, 26, 30, 31, 35, 36, 42 to 49-A, inclusive, 54 to 58, inclusive, 59-A, 60, 63 to 79, inclusive, 81 to 94, inclusive, 96, 101, 116 to 128, inclusive, need not be printed in the transcript of the record, and that the said exhibits, together with all other original exhibits presented by the plaintiff and the defendant at the trial be transmitted to the Clerk of the United States Circuit Court of Appeals for the Sixth Circuit, at Cincinnati, Ohio, for use by the said Court in connection with the appeal in this cause, to be safely kept by him and returned upon the final determination of said appeal.

RICHEY & WATTS,
Attorneys for Plaintiff.

EDWARD L. REED,
Attorney for Defendant.

PRINTER'S NOTE:

An exactly similar Stipulation was filed in Case No. 965, but signed by Corbett & Mahoney as Attorneys for Defendant.

ORDER WITHDRAWING CERTAIN EXHIBITS.

(Entered Sept. 24, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

Pursuant to stipulation filed herein, it is ordered that Plaintiff's Exhibits P-12, P-12-1, P-12-2, P-13, P-14, P-15, P-16, P-17, P-18, P-19, P-20, P-21, P-24 to P-37, inclusive, P-39 to P-44, inclusive, P-47 to P-72, inclusive, P-74 to P-77, inclusive, and Defendant's Exhibits 1, 2, 4, 5, 6, 9 to 16, inclusive, 18, 19, 21 to 23, inclusive, 26, 30, 31, 35, 36, 42 to 49-A, inclusive, 54 to 58, inclusive, 59-A, 60, 63 to 79, inclusive, 81 to 94, inclusive, 96, 101, 116 to 128, inclusive, need not be printed in the transcript of the record, and that the said exhibits, together with all other original exhibits presented by the plaintiff and the defendant at the trial be transmitted to the Clerk of the United States Circuit Court of Appeals for the Sixth Circuit at Cincinnati, Ohio, for use by the said Court in connection with the appeal in this cause, to be safely kept by him and returned upon the final determination of said appeal.

GEO. P. HAHN,
United States District Judge.

Dated September 24th, 1931.

PRINTER'S NOTE:

An exactly similar Order was entered Sept. 24, 1931, by Geo. P. Hahn, Judge, in Case No. 965.

STIPULATION AND ORDER RE AMENDMENTS OR OBJECTIONS TO NARRATIVE FORM OF TESTIMONY.

(Filed Sept. 25, 1931.)

[Cases Nos. 964 and 965]

It is hereby stipulated and agreed by and between Counsel in the above entitled causes, this Honorable Court consenting, that the Plaintiff's time for filing amendments or objections to the Narrative Form of Testimony lodged by Defendants in the clerk's office September 15, 1931, in the above entitled causes, may be and is hereby extended to and including Monday, September 28, 1931.

EDWARD L. REED,
Attorney for
The General Excavator Company.

CORBETT & MAHONEY,
Attorneys for The Osgood Company.

RICHEY & WATTS,
Attorneys for Keystone Driller.

Cleveland, Ohio, September 25, 1931.

It is so ordered.

GEO. P. HAHN,
United States District Judge.

PRINTER'S NOTE:

The list of Corrections in and Amendments to the Narrative Form of Testimony which Counsel stipulated should be embodied in the Narrative that was delivered to the printer were all transcribed upon the copy of same before it was reduced to type, and same has been omitted herefrom to avoid duplication and expense.

PLAINTIFF'S ADDITIONAL PRAECIPE FOR TRANSCRIPT—CONSOLIDATED.

(Filed Sept. 26, 1931.)

[Cases Nos. 964 and 965]

To the Clerk of the United States District Court for the Northern District of Ohio, Western Division:

Sir:

You are hereby requested to include in the transcript of record to be filed in the United States Circuit Court of Appeals for the Sixth Circuit in the above entitled consolidated cause, pursuant to a cross appeal from an interlocutory decree on the 21st day of July, 1931, in each of the above entitled causes, the following papers:

PAPERS IN EQUITY CAUSE NO. 964.

1. Plaintiff's Interrogatories and Order, filed October 21, 1929.

2. Defendant's Objection to Plaintiff's Interrogatories, filed October 31, 1929.

3. Offer by Plaintiff to Produce Letters, Documents, Etc., filed December 31, 1930.

4. Motion for Prompt Decree, filed June 25, 1931, by Plaintiff.

PAPERS IN EQUITY CAUSE NO. 965.

1. Supplemental Bill of Complaint, filed August 21, 1929.

2. Plaintiff's Interrogatories, filed February 9, 1929.

3. Affidavit of R. R. Downie, filed February 9, 1929.

4. Objections to Plaintiff's Interrogatories, filed February 26, 1929.

5. Plaintiff's Answer to Defendant's Objections to Plaintiff's Interrogatories, filed March 5, 1929.

6. Plaintiff's Interrogatories, filed October 21, 1929.

7. Objections to Plaintiff's Interrogatories, filed October 31, 1929.

8. Offer by Plaintiff to Produce Letters, filed December 31, 1930.

9. Plaintiff's Motion for Entry of Decree, filed June 25, 1931.

RICHEY & WATTS,
Attorneys for Keystone Driller Company.

Service of copy of the foregoing papers is hereby acknowledged this 25th day of September, 1931.

EDWARD L. REED,
Attorney for General Excavator Company.

CORBETT & MAHONEY,
Attorney for Osgood Co.

STIPULATION RE CERTIFICATION OF RECORD.

(Filed Sept. 26, 1931.)

[Case No. 964]

In accordance with Section 6 of Rule 44 of the General Rules of this Court, it is hereby agreed that the record as presented to the Clerk by the printer may be certified by the Clerk, as required by law and the Rules of the United States Circuit Court of Appeals for the Sixth Circuit, as a true, full and complete copy of the original pleadings, papers, and orders, used on the trial of this cause, as set forth in the praecipes for transcript, without further comparison by the Clerk.

Dated: September 25, 1931.

RICHEY & WATTS,
Attorneys for Plaintiff.

Dated: September 25, 1931.

EDWARD L. REED,
Attorney for Defendant.

PRINTER'S NOTE:

A Stipulation was filed on Sept. 26, 1931 in Case No. 965, exactly like the foregoing, except that it was signed by Messrs. Corbett and Mahoney as Attorneys for Defendant.

STIPULATION AND ORDER RE PATENTS.

(Filed Oct. 14, 1931.)

[Cases Nos. 964 and 965]

It is hereby stipulated by and between the parties, subject to the approval of the Honorable Court, that copies of the answer patents need not be included in more than fifteen (15) copies of the record to be filed with the Court of Appeals in the above-entitled cause.

RICHEY & WATTS,
Attorneys for Keystone Driller Co.

EDWARD L. REED,
Attorney for The General Excavator Co.

CORBETT & MAHONEY,
Attorneys for The Osgood Co.

Order.

It is so ordered.

GEO. P. HAHN,
United States District Judge.

Dated October 14, 1931.

ORDER EXTENDING TIME FOR FILING TRANSCRIPT OF RECORD IN THE UNITED STATES CIRCUIT COURT OF APPEALS.

(Entered October 20, 1931, by Paul Jones, Judge.)

[Case No. 964]

Upon application made and for good cause shown, it is hereby ordered that the time for filing the transcript of record in the above cause in the United States Circuit Court of Appeals for the Sixth Circuit be extended from October 28, 1931 to November 21, 1931.

PAUL JONES,
Judge, U. S. District Court.

October 20, 1931.

PRINTER'S NOTE:

An exactly similar order was entered on October 20, 1931, by Paul Jones, Judge, in case No. 965.

CERTIFICATE OF CLERK.

NORTHERN DISTRICT OF OHIO, ss.

I, F. J. Denzler, Clerk of the United States District Court within and for said district, do hereby certify that the foregoing printed pages contain a full, true and complete copy of the record and all proceedings in this cause, including the petitions for appeal, assignments of error, orders allowing appeal and the bonds on appeal, in accordance with the praecipes for transcript filed herein, the originals of which, except certain exhibits withdrawn by leave of Court, remain in my custody as clerk of said Court.

There is also attached to and transmitted herewith the citations issued and allowed herein.

In testimony whereof, I have hereunto signed my name and affixed the seal of said court, at Toledo, in said district, this 16th day of November, A. D. 1931, and in the 156th year of the Independence of the United States of America.

F. J. DENZLER,
Clerk,

(Seal)

By K. V. WILSON,
Deputy Clerk.